SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SONOMA

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BROOKTRAILS TOWNSHIP COMMUNITY SERVICES DISTRICT, a Public Agency,	)	
Plaintiff,	)	
vs.	)	Case No. SCV 253175
CITY OF WILLITS, a General Law City; and DOES 1 through 100, inclusive,	)	
Defendants.	)	

DEPOSITION OF DONALD G. McEDWARDS, Ph.D.

Monday, April 21, 2014

Reported by:

KIM Y. ROTHERHAM, CSR No. 7397

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BE IT REMEMBERED THAT, pursuant to Notice, on Monday, April 21, 2014, commencing at the hour of 10:08 a.m., thereof, at the Law Offices of GEARY, SHEA, O'DONNELL, GRATTAN & MITCHELL, P.C., 37 Old Courthouse Square, Santa Rosa, California, before me, KIM Y. ROTHERHAM, CSR No. 7397, State of California, personally appeared:

DONALD G. McEDWARDS, Ph.D.,

called as a witness by the Defendants; who, having been duly sworn by me, was thereupon examined and testified as is hereinafter set forth.

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A P P E A R A N C E S

For the Plaintiff:

Law Offices of DANIEL F. CROWLEY & ASSOCIATES
37 Old Courthouse Square, Suite 200
Santa Rosa, California 95404

By: DANIEL F. CROWLEY, Esq.

For the Defendant:

Law Offices of GEARY, SHEA, O'DONNELL, GRATTAN & MITCHELL, P.C.
37 Old Courthouse Square, Fourth Floor
Santa Rosa, California 95404

By: LEO R. BARTOLOTTA, Esq.

I N D E X

I N D E X -- (Cont'd)

DEPOSITION EXHIBITS		PAGE
177	One-page document entitled, "Enhancement Wetlands Site Plan"	100
178	Five-page Cost Proposal on the letterhead of The McEdwards Group, dated May 29, 2013, addressed to Denise Rose, General Manager, City of Willits	111

DONALD G. McEDWARDS, Ph.D.,

having been first duly sworn, was

examined and testified as follows:

EXAMINATION

BY MR. BARTOLOTTA:

Q. Good morning.

A. Good morning.

Q. Could you please state your name and spell your last name for the court reporter.

A. Donald George McEdwards, M-c-E-d-w-a-r-d-s.

Q. Thank you. Have you ever had your deposition taken before?

A. Yes.

Q. Approximately how many times?

A. Five.

Q. When was the last time?

A. Five years ago. I don't really remember.

Q. Okay.

A. I don't do many of these.

Q. Okay. The five depositions that you took, how many of them were as an expert witness?

A. All of them.

Q. Okay. So I'm going to review the ground rules. I'm sure you've heard them before, but it's been five

years, so I'll go through them and remind you. Okay?

Everything we say is being taken down by the court reporter verbatim. In order to make sure that things go smoothly, wait until I'm done with my question before you give an answer. I'll wait until you give your full answer before I ask my next question. I need you to give a verbal response. An "huh-uh" or "uh-huh" doesn't really come up on the transcript.

If I ask you a question you don't know the answer to, please say "I don't know." If you say "I don't remember," that's a perfectly valid answer also. Okay? However, if I ask a question and you answer it, the assumption is you understood what my question was. Okay? So if I ask a question and you don't understand it, please say "I don't understand it" or "I can't answer it the way that you phrased it," and I will re-ask the question.

I don't want you to guess, I don't want you to speculate, but I am entitled to your best estimates. I think estimates in this deposition may be something that come up. Do you know the difference between a guess and an estimate?

A. Yes.

Q. Okay. If you need to take a break at any time, let me know. Whether it's to talk to counsel, take a

phone call, use the restroom, just let me know and we'll go off the record. Okay?

A. Yes.

Q. You're going to get a copy of this transcript at a later date. You're going to be able to make changes to the transcript, changes to your answers; however, you should be forewarned that if you make changes of a substantive nature, such as a "yes" to a "no" or add facts that I don't get to ask you about, that that could be commented on at the time of trial. It could affect your credibility. Do you understand that?

A. Yes, I do.

Q. Okay. Is there any medications that you've taken in the last 48 hours that would affect your ability to give clear testimony?

A. No.

Q. Any other reason that we can't go forward with your deposition today?

A. No.

MR. BARTOLOTTA: Okay. Very good. I'm going to mark as 69 the Notice of Taking Deposition and Request to Produce Documents and Things.

(Deposition Exhibit 169 was marked for identification.)

MR. BARTOLOTTA: I'm sorry; Exhibit 169, I

mean.

Q. Have you seen this document before?

A. No.

Q. Okay. If you turn to Exhibit A --

A. Yes.

Q. -- this is what we asked you to bring:

"Your complete file regarding plaintiff Brooktrails Township Community Services District, including but not limited to, any and all records, reports, memoranda, notes, photographs, drawings, sketches, correspondence and any other documents and things with regard to any and all consultations, studies, examinations, inspections and/or tests performed with regard to the subject case."

It goes on to request examinations, inspections and tests and any and all writings relating to those. Have you produced -- as part of what is sitting in front of us, the physical documents, as well as the thumb drive that you've given us, have you given us everything that's responsive to paragraph No. 1?

A. I did not know I needed my Curriculum Vitae because I gave that to Chris Neary.

Q. Okay. I have a copy so we'll go over that.

A. Okay. And I think he said that -- this is last minute. That's my billings to date. You wanted that too, according to this.

Q. Yes.

A. I just went through my book and pulled out the ones from that job.

Q. Can I keep this copy?

A. Yes.

Q. So what I'm going to do is at some point we're going to have a break and -- what are you smiling at?

MR. CROWLEY: Nothing.

BY MR. BARTOLOTTA:

Q. And I'm going to go look at what was on the directory you provided to us.

A. Uh-huh. Yes.

Q. And I'll go through it at that time rather than make --

A. I understand. You're not going to take our time now.

Q. So let me just kind of move forward. Is there anything that you've produced in terms of notes, photographs, anything -- and when I say "produced," either created or was given to you and relied upon. Is there anything that you have not produced physically in front of me or put onto the thumb drive that we gave to

my secretary?

A. No.

Q. Okay. The billing records that you just provided a copy of to me, these are dated from November showing work done in October going through December 2013.

A. October -- you were given a year.

Q. I'm sorry; 2012. So it goes from -- basically the first entry on this is October 25th, 2012?

A. If that's what it says there. I can't see it from here. Yes, my first day of work on this project for Brooktrails was 10/25/12.

Q. And that first entry was:

"Photograph ponds and embankments, calculate freeboard in three ponds and e-mail titled photos to Chris Neary."

Obviously you must have met with Chris Neary --

A. Yes.

Q. -- or had a conversation with him prior to October 25th, 2012, correct?

A. Yes.

Q. Okay. What is -- when was the first time you talked or spoke with Chris Neary?

A. Possibly a week before. I don't recall. I didn't charge for it, it was such a brief meeting.

Q. Okay. Have you ever worked with Mr. Neary

before?

A. Several times, yes.

Q. Had you ever worked with him before as -- in relation to Brooktrails?

A. No.

Q. First time being engaged by Brooktrails?

A. This is the first time for Brooktrails.

MR. CROWLEY: Let Lee finish his question. It makes her job a lot easier.

BY MR. BARTOLOTTA:

Q. How many times have you worked with Chris Neary prior to this engagement?

A. Seven, about. I'd have to go back and look at my project log. Possibly more, but I've forgotten.

Q. And all of those in your capacity as an expert?

A. No.

Q. Okay. How had you worked with Mr. Neary prior to this?

A. The very first involvement with Chris was when I -- he asked for -- I worked in Santa Rosa, and he asked for a bid to investigate an underground tank leak at the Navarro Store in Navarro, as well as remove the tanks. So I was the successful bidder, so that's my first involvement with him. That was in the '90s.

Q. Okay. What kind of tanks in Navarro?

A. Gasoline, underground fuel tanks. There used to be a station there. Leaking underground storage tanks.

Q. Was this related to litigation that was ongoing --

A. No. They needed a consultant on --

Q. Wait until I finish my question. Was that related to litigation or was that for a client of his, just an ongoing environmental issue that needed to be addressed?

A. For a client of his.

Q. Okay. And so that was actually work that you were doing as a consultant engineer -- is it geohydrologist?

A. Hydrogeologist.

Q. Hydrogeologist. I got it reversed.

And that did not result in any litigation?

A. No, it did not.

Q. At least as far as you know?

A. That's correct. The site is closed. There's no litigation.

Q. What was the next time you recall working for Mr. Neary?

A. I can't remember the next job. I've worked on -- there was a question about drainage in the building

he is in, and I was asked to comment on SHN's report on that and about the source of TCE in the groundwater next to the dry cleaning building that was affecting his building in Willits.

Q. When was that?

A. Two years ago.

Q. Was he the owner of the building?

A. No.

Q. He was just a tenant of the building?

A. That's correct. And I did work for the owner, Galen Hathaway, regarding the TCE in the building and the effect of the groundwater on it.

Q. And what is TCE?

A. Trichloroethylene.

Q. And that's a byproduct of dry cleaning?

A. No. It's the chemical used to dry clean. It's often called perchloroethylene too.

Q. And you were engaged to do tests or just to look at reports that had been done?

A. One of the phases was what's the effect on health and the people in the building, so I set up Summa canisters to measure the air, the volatiles in the air and the working spaces.

Q. And whatever became of that?

A. I gave the test results to Chris and I haven't

followed through.

Q. Okay. Can you name another project that you've done with Chris?

A. He is the attorney for the Harwoods, and so I investigated the Harwood Mill in Branscomb as required by the Water Board to investigate all sorts of contaminants there. And that is almost winding down. We have a little more monitoring to do, a little more boring, and then it will be closed.

Q. And who is your actual -- who are you working for?

A. Calvin Harwood. Jackson Valley Industries.

Q. That's the client --

A. They changed their name, yes, for some financial reason, but that's who I bill.

Q. I'm sorry; Jackson?

A. Valley. Branscomb is in the Jackson Valley.

And then I worked for, I think it's the Community Services District. I didn't work directly for Chris, but that was his client, and I worked for them as well to look at the -- their waste -- their treatment plant in Covelo.

Q. And what did you do for them?

A. I just got familiar with the treatment plant and gave my opinion as to the operation.

Q. And you're talking about a wastewater treatment plant?

A. Yes, it's the POTW in Covelo.

Q. And when was that work?

A. Two years ago, possibly three.

Q. And what was the actual assignment that you received?

A. Go up and talk to the operator and get an idea of what he does every day and why he has to do it and so forth and the design of the plant and so forth.

Q. And do you know what that information or what your opinions were being used for?

A. No.

Q. And did you prepare a written report?

A. No.

Q. And did you report directly to Chris Neary?

A. Yes, and we had a meeting with the Community Services Board as well.

Q. And what was the subject matter of the discussion with the Board?

A. They were thinking of suing SHN.

Q. What does SHN stand for?

A. That's the short name for the consulting firm in Willits. It's Selvage, Heber, Nelson, I believe is their actual names. They have an office in Eureka as

well.

Q. And do you know if they ended up suing SHN?

A. I do not know.

Q. And what was the issue that they would have -- was being considered for purposes of suing them?

A. Poor design of the plant.

Q. Poor design?

A. (Witness nods head.)

Q. And did you express any opinions as to whether the plant was designed properly or not?

A. No.

Q. Were you --

A. Not that I remember. I may have. I don't remember. I just don't remember.

Q. Okay. So what was your understanding of your role?

A. To understand the operation and how -- what they were doing and how the plant operated.

Q. So other than meeting with the plant operator and then meeting with the Board to discuss how the plant operates, did you do anything further?

A. I met with the Board, but I was essentially a bystander and I heard what was going on. I didn't contribute to the discussion.

Q. Okay. Any other project that you can think of?

A. There was a junkyard in Ukiah, which is next to the Pomo Indian Reservation there. I think it's Pomo. And they were suing him, the junkyard operator, for creating a nuisance to the water, to the nearby creek. So Chris was their attorney, and so Chris told them to hire me to investigate the complaint.

Q. The junkyard owner?

A. Yes. T & T, I think it's called. And we were able to show that the only problem that was coming -- the only problem was the actual Indian Reservation itself; that T & T was not contributing anything. But as part -- and they got a -- what do you call it? Summary judgment dismissing the suit.

Q. So this was a lawsuit?

A. That was -- yeah. Yeah. Correct. And then following that, as part of the -- I don't know if it's part of the settlement, but the Water Board in Santa Rosa required that they do -- that they contain the runoff water, to treat it before it went to the creek, the surface water runoff.

Q. The Pomos?

A. No. No, the junkyard. So I designed that for them and they constructed and built it, and they're monitoring it and I haven't heard anything from them.

Q. Did you submit a declaration or prepare a

declaration in support of the summary judgment related to the suit?

A. Yes.

Q. Do you remember the name of the client? T & T?

A. T & T, yes.

Q. And that was filed in Mendocino?

A. I believe so. It was in Ukiah, the site was.

Q. Anything else that you can recall?

A. I've done numerous odd jobs for Chris, but they're so -- so small, time extent, I can't remember.

Q. Any other cases involving lawsuits that you can recall?

A. Well, I did hire Chris to represent me, but that wasn't -- nobody else was involved.

Q. And what was that related to?

A. That was a contractor had not paid me for a job in Sonoma. Solano Avenue was the name of it. That's the street the site was on, Solano Avenue.

Q. So this is basically a breach of contract case?

A. Yes, right. And we finally settled and that was it. But he was my attorney.

Q. When was that?

A. Seven years ago, eight years ago.

(Off the record.)

MR. BARTOLOTTA: Back on.

Q. How many times have you served as an expert witness?

A. I believe I answered that. I think about -- oh, expert witness, not deposition. Three times, I believe. But that's in court.

Q. Three times that you've --

A. I can only remember one occasion when I worked for Harding Lawson. There was this eminent domain dispute about Highway 80 going through a gravel pit, and I was the expert witness on how it affected the drainage of this pits -- this wash water pits. And that was 7 -- '80-something. A long time ago.

Q. So how many times have you testified in trial?

A. That one in Reno and the one with Chris when he was my attorney. I'm sure there's another one, but I just can't remember.

MR. BARTOLOTTA: All right. So I'm going to mark next in order your CV.

(Deposition Exhibit No. 170 was marked for identification.)

BY MR. BARTOLOTTA:

Q. So this was provided to us. If you could just take a brief look at it and tell me if it's a current copy of your CV or whether there's any additional work or articles or anything that aren't on here.

A. This I last updated about 15 years ago, so this is 15 years old, but I never bothered to change it, but there's no publications -- is there another page here? There's a newer version, but the only thing different between the newer version and this one is I have in my Exhibit 1, I invented a groundwater pump and that was down here as well, but that's not germane.

Q. That's the only change?

A. Yes. This is quite old because it has my phone number as 459-1086 and I changed that, like, two years ago.

Q. Okay.

A. I did send Chris a new copy. I don't know what happened.

MR. CROWLEY: You sent --

THE WITNESS: Chris a new --

MR. CROWLEY: -- an updated CV?

THE WITNESS: Yes. I like to call it resume.

MR. CROWLEY: I was just going to see if Chris --

MR. BARTOLOTTA: This is the one we got that was attached to the --

MR. CROWLEY: Then I have the same one you have. That's what I was going to look at. If we get it --

THE WITNESS: Would you like me to e-mail you the new one? Would that make any difference?

MR. BARTOLOTTA: You can do it. Well, you can give it to Mr. Crowley and he can forward it to us.

MR. CROWLEY: I'll ask Chris to send it to me.

BY MR. BARTOLOTTA:

Q. So The McEdwards Group is what you've -- the name you've been working under since 1995, correct?

A. Yes.

Q. Okay. Tell me about who else works at The McEdwards Group besides you.

A. Nobody else. I did have an employee once for about six months.

Q. Didn't work out?

A. Didn't work out.

Q. Who was that employee or what was that position?

A. It was a groundwater sampler. It was easier to do it myself than tell him how to do it.

Q. Okay. And in terms of the work that you've been doing since 1995, has that all been out of Willits?

A. No. I moved to Willits in '96 from Santa Rosa. I had an office on B Street here in Santa Rosa.

Q. Since 1996, have you -- well, strike that.

In terms of representative projects that you

have listed here --

A. Yes.

Q. -- can you explain to me your intent in putting those specific projects on your CV?

A. To provide a broad view of my experience.

Q. Is this a complete list of everything that you've done in terms of projects?

A. As I said before, this thing is -- this resume is 15 years old as far as the number of projects I've done.

Q. Okay. And even being 15 years old, is this just a representative sample of projects that you had worked on or was it --

A. Yes.

Q. -- as of 15 years ago, was this a complete list?

A. This is not a complete list as of 15 years ago. These are the highlights. Most of my work since the preparation of this has been in underground tank sites.

Q. Okay. So why don't you explain to me what the scope of work is that you do as a geohydrologist -- hydrogeologist?

A. I investigate and remediate groundwater and soil contamination caused by leaks from underground storage tanks or septic tanks or surface spills.

Q. So that was underground storage tanks, septic --

A. Yes.

Q. -- tanks or surface spills?

A. Of contaminants.

Q. What percentage of the work that you do is related to consulting work related to underground tanks?

A. Probably 90 percent. It's dropping off now. The sites close -- the State is closing a lot of sites.

Q. And underground tanks, I assume, is everything from old gas stations to old heating oil tanks?

A. Those are the primary classes, the leaking residential fuel tank and then the commercial mom and pop store or commercial gas station with leaking tanks.

Q. Are you involved with the one over here on the end of B Street by chance?

A. Which one was that?

Q. It's by the Perry firm. Right next to it is an ongoing project. Apparently that's a tank.

A. No, I'm not.

Q. And right behind it is Santa Rosa Creek.

MR. CROWLEY: That's PG&E.

MR. BARTOLOTTA: Is that PG&E?

MR. CROWLEY: That was a PG&E tank --

THE WITNESS: I was involved in the Occhipinti

site. He's moved since. That was a big plume.
BY MR. BARTOLOTTA:
Q. In terms of surface contaminants, how much work have you done as it relates to that?
A. I can't recall. Oh, the most recent project was they took a tank out in Cleone, a residential house, and they replaced it with an above-ground fiberglass tank that they filled with heating oil, but it rained and the water displaced it and it fell on the ground. So that's a current project.
Q. Okay. How much of your work as a hydrogeologist has been involved with municipal sewer systems?
A. Just this one and the one in Covelo.
Q. And that was the consulting work that you'd done for Chris Neary that we discussed before?
A. That's correct.
Q. And that was basically limited to an interview of the operator and participation in some meetings?
A. Yes.
MR. BARTOLOTTA: I'm going to take one second.
(Break taken from 10:35 a.m. to 10:36 a.m.)
THE WITNESS: I have another comment on surface spills.
BY MR. BARTOLOTTA:

Q. Yes.
A. Chris Neary got me involved in the Ukiah Depot.
Q. Okay.
A. And Westin Associates, I think is the name. They had a work plan that I modified and got approved, and so we're in the final throes of finishing that site. Removal of contaminated soil after sampling.
Q. What was the contaminant in that case?
A. Polyaromatic hydrocarbons, PAHs, and diesel.
Out of the panoply of contaminants they looked at, those are the two they decided were important.
Q. Okay. In terms of either what's listed on your CV or work that you've done, have you in the past done -- other than this case and the Covelo issue that we talked about, have you ever worked on a project where you were involved in the assessment of a city's sewer collection system, or municipalities, doesn't matter?
A. No.
Q. Have you ever had a project where you were involved in the construction analysis assessment of a wastewater ponding system?
A. To the extent you can call surface water runoff water that needs to be treated or contained, yes, I designed a system for that junkyard in Ukiah, T & T.
Q. In terms of the capacity of -- in other

words -- well, why don't you tell me what that project was. What did you eventually design for them?

A. It was a big concrete containment structure. I'm guessing it was maybe 600 to 1,000 gallons capacity to catch the excess runoff before -- so it wouldn't run off into the creek and it could get metered out and have all the debris settle out.

Q. So other than that system for the junkyard, have you ever done assessment analysis of a wastewater ponding system?

A. No. As you said, except for these projects.

Q. Have you ever done a project design analysis of a wastewater disposal plant's capacity?

A. No.

Q. Ever -- other than this case and the Covelo, have you -- well, strike that.

So what was your understanding of your assignment when Mr. Neary first contacted you?

A. He heard from John Ford, who lives next to the treatment plant grounds, that he wasn't getting irrigation water he normally does. And this was after the wetlands were completed and the new plant in Willits. So I had a discussion with Chris over this, and he suggested I visit the plant and see what the thing looks like.

Q. Who's John Ford?

A. He's a neighbor to -- he has lands adjacent, I believe, to the sewage treatment plant, and he was provided irrigation water for his crops -- treated water.

Q. And directly from the plant?

A. Yes.

Q. How much?

A. I don't know.

Q. And was there any explanation that Mr. Neary provided to you as to why he believed there was a reduction in irrigation water?

A. He told me that John Ford told him that the ponds were leaking, the wetlands were leaking. That's why there's no water storage to give to John.

Q. And was it your understanding that this assignment was in relation to work Mr. Neary was doing for John Ford or that he was doing for Brooktrails in relation to this litigation?

A. I wasn't clear at the time who he was working for. He just asked me to go out and look at the situation, and later he told me he was working for Brooktrails. That was his interest in it.

Q. So he specifically said, "I want you to go look at the ponds to see if you can identify any sources of leakage"?

A. He didn't say "Identify sources of leakage." "Go out and look at the operation. Tell me what you find."

Q. And did he give you any documents at that time?

A. No.

Q. Do you have a recollection of this first interaction with Chris Neary as to whether this was a meeting in person or over the phone?

A. It was in person.

Q. At his office?

A. Yes.

Q. How long was that meeting?

A. Half an hour.

Q. Did you speak with John Ford?

A. No. I've never met John Ford.

Q. So what did you do in order to investigate what Mr. Neary asked you to investigate?

A. I walked up the creek from East Commercial, or I think it's Broaddus Creek, I think, the bridge over Broaddus Creek. And I walked up there and then I kept going until I was opposite -- or I thought I was opposite of the enhanced wetlands in the creek and took some photographs. And then I climbed out of the creek and walked around the berm of the enhanced wetlands structure.

Q. Okay. And what time of year was this? When was this? Is it on your bill?

A. Yes, it should be in there somewhere.

Q. Maybe that will help you give a timeline.

A. I have photographs on the disk I gave you.

Q. Okay.

A. And they're time dated.

Q. Okay.

A. So you can see that.

Q. Are those --

A. Here it is. That's 10/25/12.

Q. How long did you -- did it take for you to do this walk up the creek and inspection?

A. It says three and a half hours on here.

Q. Okay. And so tell me exactly what you did. You walked up the creek to the point where you were adjacent to the wetlands and then you walked along the berm?

A. Right. I saw where they had a stake and there's a rope they climbed up the bank with, and so that's how I got out, and that was next to the wetlands. So I walked around the wetlands and took pictures.

Q. Okay.

A. And I just noticed on my billing, I may have missed a bill. I'm not sure. I thought I had it. I

think I made two trips to there because I don't remember really, but the last item on my first bill I gave you said on 10/30 I reviewed photos taken on 10/3/12. And that's -- yeah, I'm mixing it up here. And that's when I walked up the creek and looked at the sample location 2 which was in the creek. But the pictures will speak for themselves as far as the photographs.

Q. Okay.

A. So I must have met with Chris before the 3rd and didn't bill it.

Q. Okay.

A. Or maybe I have and I don't have the invoice.

Q. When you say the 3rd, you're talking October 3rd --

A. Yes.

Q. -- 2012?

A. That's correct.

Q. What did you find on that initial inspection?

A. Of what? Inspection of what?

Q. The ponds, the wetlands.

A. The wetlands?

Q. Yes.

A. I found that the water level was maybe two feet deep, and I did some -- two feet deep. And there was a band of green vegetation growing approximately the same

distance from the toe of the outside of the embankment all around the ponds, which did not extend further, and maybe a 20-foot band, maybe 15 feet away from the toe.

Q. Okay.

A. And I lined myself up so I could look down the axis of the embankment, like a truck would drive. And I could see the water on one side and I see the lush vegetation at that time on the other side. It was about, from what I could judge, maybe a foot difference between the water level and the green. So it looks like the ponds were leaking because it looked like the green vegetation was getting moisture from the ponds.

Q. And what significance was that to you?

A. Water was going from the ponds to the green vegetation underneath the embankment.

Q. And this was based upon your visual observation?

A. Yes.

Q. Did you do any testing to determine whether --

A. No. I'm sorry. No.

Q. Did you do any testing to determine whether there was actual leaking?

A. No.

Q. How did you determine that it was two feet deep?

A. I had the construction plans that Chris had given me and from the photographs that I took of the inside of the wetlands, there are three ponds in the wetlands and there's a barrier, a smaller berm, that separates the three ponds, two berms, and I could see the water level on the weir structure going from one pond to the next. So I took a picture along -- looking along that median berm and I was able to scale off the picture distances.

Q. Did you actually physically measure anything?

A. I measured the rungs. There's a structure there like a ladder you climb up to maintain the thing. And I believe I measured the distance between the rungs and used that as the scale to get the depth of the water.

Q. You understand that you were designated as an expert witness in this case?

A. Yes.

MR. BARTOLOTTA: We'll mark next in order Disclosure of Expert Witness with the date stamp received by us of March 28th, 2014.

(Deposition Exhibit No. 171 was marked for identification.)

BY MR. BARTOLOTTA:

Q. If you turn to page No. 5, the number at the bottom.

A. Yes.

MR. CROWLEY: 5 and 6.

BY MR. BARTOLOTTA:

Q. At the very bottom of page No. 5, there's a sentence that starts, "Dr. McEdwards is expected to testify..." Do you see where I'm talking about?

A. There it is, yes.

Q. Okay.

> "...is expected to testify as to the characteristics of the Willits Wastewater Plant as designed and as constructed."

A. Yes, that's what it says.

Q. Are you prepared to give those opinions today?

A. As far as my knowledge permits, yes.

Q. Okay. What opinions do you have regarding the design of the Willits Wastewater Plant as designed? And if it's helpful for you to do that -- you know, it says "Willits Wastewater Plant as designed and as constructed." I assume that there's a comparison that should occur between the design and the way it's constructed. So my question is, what opinions do you have related to that sentence?

A. As -- I believe it was constructed as designed. I don't have any -- any opinion on that. If the question

was, was it constructed as designed, I'd have to say it was.

Q. Did you obtain -- were you provided with copies of the design?

A. Yes, I was.

Q. And did you --

A. Construction drawings, yes.

Q. And did you have an opportunity to see the plan and inspect it?

A. Yes.

Q. And so basically, as far as you can tell, design and construction are the same thing?

A. It was constructed as designed.

Q. Okay. It then says -- I'm just breaking down the commas in that sentence -- he's expected to testify as to "the impact of inflow and infiltration." Do you have opinions regarding the impact of inflow and infiltration?

A. I have to get specifically what you mean by "infiltration."

Q. Well, how do you define "infiltration"?

A. Infiltration can be coming into the plant or leaving the plant by infiltration.

Q. Well, do you have opinions regarding the impact of infiltration going into the plant?

A. Yes.

Q. Do you have opinions regarding the impact of infiltration leaving the plant?

A. Yes.

Q. Okay. Let's start with your opinions regarding infiltration entering the plant.

A. The flow to the plant increases markedly -- the influent to the plant, volume, increases markedly during rainy season, and the only cause I can think of for that would be the sewer collection system leaking and admitting groundwater into it and increasing the volume of sewage.

Q. So in other words, this is actual rain runoff flowing into the collection system which then transports the water to the plant?

A. Rain runoff mediated by the rise -- causes the rise in groundwater which then leaks into the pipes.

Q. At some point I want to get into details of that, but I want to ask you -- I think what you provided me was a summary of what your opinion would entail, correct?

A. Yes, that's the impact of infiltration for water going into the plant.

Q. Okay.

A. I have no other comment on that.

Q. What about water coming out of the plant?

A. Water coming out of the plant is less than water coming into the plant on a volume basis. Water coming into the plant is greater than water leaving the plant based on the flow metering records maintained by the City.

Q. And what do you attribute that to?

A. There appears to be two places in the plant where water is lost by, quote, "infiltration" to the ground. If you do a balance of inflow, that's the influent coming in, metered influent, versus adding all the sources of outflow, the metered outflow, you get a large discrepancy in millions of gallons throughout the year.

Q. And --

A. I'm sorry; let me correct myself. You take inflow coming into the headworks of the plant, metered, and you subtract every month and you keep an accounting of the water, metered, coming out of the treatment system before it hits the wetlands or irrigation. There's a disparity there of millions of gallons based on their metering.

Q. Okay.

A. That's one loss.

Q. Well, hold on.

A. Somehow.

Q. Back up. Yes, so you're saying somehow there's a loss because metered in doesn't match metered out?

A. Correct.

Q. What is your opinion as to where that loss is occurring?

A. I think the surge ponds or equalization ponds leak. I don't know where that water is going, but all I know is if the metering is correct, there's a discrepancy. It's more than a few percent.

Q. Okay. That was number one.

A. Correct. That was number one, infiltration effects out-go. Number two is, if you take the metered outflow from this treatment system and then you subtract all the metered outflow for irrigation and -- from the ponds or to the ponds -- no; I'm sorry. Let me rephrase that. Outflow from irrigation, spray irrigation, and discharge to the creek, you also get substantial difference. Water is lost in that process somehow, and I believe it's because it's leaking from the wetlands.

Q. Okay. So we'll go back to that. Next it says that you will give an opinion, quote, "regarding" -- well, regarding, quote, "...the operation of the Willits Wastewater Treatment Plant in fact and as permitted." What are your opinions with respect to that?

A. I'll have to go and talk about the variance they got for -- from the Groundwater Basin Plan where they were previously permitted to put discharge treated effluent into the creek at a ratio of 100 to 1. And they got a variance where they could put it by 10 to 1 in the creek during certain times -- well, when the volume of the creek was high. No. No. No. No. That's not correct. October through May 15th, I think. There's a certain time period they could do that.

They got that variance by depending on the -- let me back up. As part of the -- I believe as part of the agreement with the Water Board, they've reduced the contaminant in BOD and TDS from 30 milligrams per liter to 10 respectively, and they had to monitor for total nitrogen, which they weren't required to do before. And the document that was commissioned, I guess, that described how the variance was a reasonable thing to do, prepared by -- I forget the name of the consulting firm. It wasn't SHN, it was someone else. They relied on the residence time of water in the wetlands to reduce the nitrogen content naturally as part of the treatment.

Well, I don't think that happened much because the wetlands leaked. And often the City would just take the water from -- instead of going directly into the -- it never went into the ponds, it went right into the

creek. So it never had a chance to ameliorate, let's say, in the ponds. So the operation of the treatment plant in fact, in that regard, does not operate as permitted.

Q. Currently?

A. Currently.

Q. So is your opinion the Willits Wastewater Treatment Plant as operated is not in compliance with the permitted use?

A. It's not in compliance with the rationale in the variance -- supporting the variance that they received.

Q. Okay. When did they receive the variance?

A. I do not know.

Q. Have you seen the variance?

A. Yes, I have. I do not remember the date. But I understand the variance was gotten before the plant came into operation. And once it was in operation, it permitted this 10-to-1 ratio.

Q. Okay. So your opinion is the Willits Wastewater Treatment Plant is, in fact, operating in a manner that's not in compliance with the variance?

A. Not in compliance with the bases of the variance -- the assumptions made in arguing for the variance.

Q. Okay. And what's the significance of that?
A. If the bases for the variance are not fulfilled, then the variance is in question.
Q. Okay. And so -- okay. What did you do to verify that?
A. I didn't do anything. I do note, though, that five out of the seven months -- twelve months of 2013, they had an exceedance of nitrogen they reported in their self-monitoring reports during the wet months.
Q. Okay. Let me ask -- I guess my question is, what documents did you review, what work did you do to arrive at the opinion you arrived at?
A. There's a document on the disk I gave you that Chris gave me that talked about -- that there was a report in support of the variance. They did a bunch of modeling and assumed a bunch of things, one of which, the wetlands were not leaking and they were discharging from the wetlands, not directly from the treatment plant.
Q. Okay.
A. So that I reviewed. I reviewed the self-monitoring reports put out by the City and found that five of the twelve months they had excess nitrogen. It's supposed to be 10 milligrams per liter; it's 22 or 24, in that range, every time.
Q. And when was that? What were the dates of

those --

A. August -- I believe it was July through December.

Q. Of which year?

A. 2013.

Q. Okay. Next you're going to give opinions regarding "...the hydrology of the Little Lake Valley and" -- well, it just says that.

A. You want to talk about "as permitted" as well?

Q. I actually thought we just had.

A. We hadn't.

Q. Okay.

A. "Operation of the Willits Plant in fact" --

Q. Okay.

A. -- "and as permitted."

Q. Right.

A. So as --

Q. So you're basically making a comparison between the readings that were provided to you and what is permitted?

A. Yes. I'm basing it on the Order.

Q. Okay. And we're going to go back to that. I just want to cover your initial --

A. I can't. I have to bring the Order in to talk about the operation of the plant as permitted.

Q. Okay. We'll come back to it.
A. Okay.
Q. The only problem I have is that I haven't had a chance to see what you brought as documents yet --
A. I have --
Q. -- so --
MR. CROWLEY: Let him finish.
BY MR. BARTOLOTTA:
Q. So I will come back to that. Okay?
A. Fine.
Q. Next it says that you're going to provide opinions regarding the Little Lake Valley -- "...the hydrology of the Little Lake Valley." Do you know what opinions are expected to --
A. No. The only opinion I could give is that I understand that the wetlands were not lined nor I believe was the soil compacted in them; that they relied on the clay-like material to impound the water.
Q. What's the Little Lake Valley?
A. It's an old -- old valley filled with water from Outlet Creek.
Q. And have you looked at any studies regarding the hydrogeology -- well, of the -- of the hydrology of that valley?
A. No, I have not, hydrology. I looked at what

the soil type is in the valley.

Q. Okay.

A. And it's a Yolo loam, l-o-a-m.

Q. Where was that information obtained from?

A. On the Internet and from a soil conservation service book.

Q. And were either of those documents contained on the --

A. No, they're not. I didn't retain them. I just looked on the Internet.

Q. Okay. What was the Internet site that you would have gone to to obtain that information?

A. Google.

Q. And, I'm sorry, they were -- what kind of loam?

A. Yolo loam. I may have mentioned this, I'm not sure, but when I first did my water balance, I think it was in the footnote that you may have in your files. And if it indeed is a footnote on my spreadsheet, you have that in my thumb drive.

Q. Okay.

MR. CROWLEY: When you say that, are you talking about the source of the -- the source that you relied on?

THE WITNESS: Yes. I'm not sure though. I'm not sure.

BY MR. BARTOLOTTA:

Q. Okay. What's the significance of the fact that the soil types are Yolo loam?

A. Well, I wanted -- in my water balance, I was trying to understand why so much water was lost and I wanted to look at the type of soil. I also looked at the evaporation -- evapotranspiration rate.

Q. And that would be the rate at which water evaporates off the surface of the pools?

A. Amended by the water lost by the plants.

Q. Okay.

A. Okay. Transpiration is the plant loss of water. Evap is the water -- loss of water from the surface.

Q. Okay.

A. And I have a reference on that on my first water balance spreadsheet.

Q. Okay.

A. And that's the extent of my hydrology of Little Lake Valley.

Q. Okay. Next it says that you'll "...express an opinion as to whether the Willits Wastewater Treatment Plant constitutes overdesign." What is "overdesign"?

A. Building something that is not necessary to handle the anticipated loads.

Q. And do you have an opinion about whether it's overdesigned?

A. No, I don't.

MR. BARTOLOTTA: Now, attached to this disclosure were a few documents that I wanted to ask you about. One of them is a letter dated November 20th, 2012, from you to the City Manager, City of Willits.

(Deposition Exhibit No. 172 was marked for identification.)

BY MR. BARTOLOTTA:

Q. Do you recognize this letter?

A. Yes.

Q. Did you draft this letter?

A. Yes.

Q. Did you actually draft the description of the categories of documents that you wanted to receive?

A. No.

Q. Who did?

A. Chris Neary.

Q. Okay. So Chris Neary -- how did that get to you?

A. He asked me to write a letter as a public citizen to the City of Willits.

Q. And --

A. And he gave me a rough outline and I fixed it

and gave him this back and he approved it.

Q. When you say he gave you a rough outline, how did he give that to you?

A. Basically the same informational points but they were badly worded, to my view.

Q. Right. Was it an e-mail to you? Was it a letter that he had sent to you and then you then cut and paste? Was it a hard letter that you then --

A. It was an e-mail, I believe.

Q. And he gave you instructions to make a public records request as a citizen to the City Manager of the City of Willits asking for these documents?

A. Yes.

Q. Okay. And did you receive documents responsive to this request?

A. I received a CD with the images of the documents on them.

Q. Okay. And did you receive documents responsive to each of the four categories listed in your letter?

A. Yes.

Q. Okay. You requested all engineering reports such as an irrigation management plan. Did you --

A. I'm sorry. No, I did not get that one.

Q. You did not get an irrigation management plan?

A. No.

Q. Okay. Did you receive any engineering reports?
A. No.
Q. Did you receive any records, quote:
"...indicating in any way the quantity of flow for metered locations designated on the plans for the treatment facility approved for construction as locations EFF-1, EFF-2, EFF-3 and EFF-4"?
A. Yes.
Q. Where did you -- did Mr. Neary advise you to ask for those specific locations?
A. No. I advised him to ask for those if he wanted to get a full record of what the in and out of the treatment plant is.
Q. What does "EFF" stand for?
A. That's effluent 1. And I believe that was a mirroring situation for the old plant, because we wanted to look at the old versus the new.
Q. And what's the difference between the flows for EFF-1 versus EFF-2?
A. I think EFF-1 was the flow from the old treatment system, the chlorination system, and EFF-2 is the one from the new system that uses UV.
Q. Okay. What about EFF-3?
A. I believe that was the discharge from the

ponds.

Q. And then EFF-4?

A. I'm sorry. Discharge from the ponds -- discharge to the creek, I believe, EFF-3. EFF-4 was discharged to irrigation.

Q. Okay. So I just want to back up a second so I can get a better understanding of this. So you basically have effluent coming into the plant?

A. Correct.

Q. That effluent is -- what happens to it once it enters the plant?

A. It goes to the storage ponds, overflow ponds or purge ponds or whatever, and that's metered into the treatment system.

Q. Okay. And once it's metered into the treatment system, it's then treated?

A. Right.

Q. Where does it go from there?

A. It goes either to -- it's metered as EFF-2 coming out of the treatment system. And from my interpretation of the flow records and the same meter readings, they sometimes took and directly put it into the creek because the creek was high enough or they put it into the ponds or they irrigated it.

Q. Okay. So there were storage ponds?

A. I'm sorry. Wetlands.
Q. Okay.
A. I'm calling the wetlands the ponds. Not the receiving ponds, the wetlands.
Q. Yes, and I just want to make sure we're using the same terminology as we move forward. So the effluent comes into the plant and goes into...?
A. The receiving ponds.
Q. Receiving pond. Okay. And is held there until it goes into the treatment system?
A. That's correct.
Q. And then after it's been treated, it goes into one of three places: Irrigation, the creek, or basically another storage pond of treated water?
A. The enhanced wetlands.
Q. The enhanced wetlands. Okay. And in terms of the initial work that you did when you walked up the creek, you were looking at the enhanced wetlands?
A. Correct.
Q. Okay. Did you look at the storage ponds?
A. No.
Q. Have you looked at the storage ponds?
A. Yes.
Q. When did you do that?
A. Six -- six or four months ago when Chris asked

me to go and take pictures of the improvements according to the plans.

Q. Okay. You next ask for:

"All effluent monitoring data for the treatment facility as maintained by the City of Willits treatment facility for internal purposes from May 2010 through October 1st, 2012."

Did you receive those documents?

A. No. I couldn't identify if it was internal purposes or just self-monitoring. All I got was the self-monitoring reports.

Q. What's the difference between internal and self-monitoring?

A. I don't know. I've never seen the internal -- internal data, if there is any.

Q. Okay. So I guess my question is, what's the distinction you make between internal and self-monitoring?

A. I don't, but they may. I didn't know.

Q. So you're saying that you weren't certain whether they kept internal monitoring that might be different than the self- -- I'm sorry, the internal might be different than the self-monitoring; you didn't actually know if that existed or not?

A. That's correct, yes.

Q. But you asked for it?

A. In case it did.

Q. Did you get anything?

A. No.

Q. Number 4:

"All effluent monitoring data for the treatment facility submitted by the City of Willits to the North Coast Regional Water Quality Control Board."

Did you receive anything responsive to that?

A. Yes, because that would be EF-3 and EF-4. That's kind of redundant.

MR. BARTOLOTTA: Okay. So then attached next in order, mark this.

(Deposition Exhibit No. 173 was marked for identification.)

BY MR. BARTOLOTTA:

Q. Exhibit 173, which was attached to your -- or the designation of experts. Can you tell me what this is?

A. That -- let me look at my file. I believe these are the influent and meter readings essentially for the old plant.

Q. For the old plant?

A. Well, the first -- top page is dated May 2010, and the plant -- the last record I have of the old plant is May 2011.

Q. This first page of Exhibit 173, was this created by you?

A. No.

Q. Who was it created by?

A. The personnel at the Willits Wastewater Treatment Plant.

Q. Okay. Is this the format that you received this information in?

A. Yes.

Q. Okay. Had you -- were you familiar with this format of reporting?

A. Not before I got them, no. It's a simple Excel spreadsheet, so, yes, I'm familiar with Excel spreadsheets.

These are copies of mine because there's -- my writing is on here, so I have them duplicated here. Yes, these are the data -- let's see how far it goes -- through May 12th, it looks like.

Q. Okay. So --

A. I'm sorry; May '12. 5/12, yeah. And that -- and I believe that the plant started operation in June of '11, so I have to do -- I have the metered data through

May of 2012 in the document you gave me.

Q. Okay. So with respect to this document, I'll represent to you that there are Excel spreadsheets similar to page 1 and then there are other spreadsheets similar to page 2, similar -- the page 2 on here, which is -- says "City of Willits" and then "(90092) Monitoring Report for the Month of May 2010."

A. Yes.

Q. Okay. Was this document created by you?

A. No.

Q. Okay. So both the page 1 spreadsheet and the second page spreadsheet were documents -- these are hard copies that you received from the City of Willits?

A. Yes. No. They were not hard copies. They were on a disk. I printed them out.

Q. Okay. But they were basically documents you printed directly from the disk?

A. Yes.

Q. And what's your understanding of the difference between these two documents?

A. I've got to look at them again. I believe they just -- they just repeat the same data in a tabular form.

Q. Okay. Let's look at the first page for May 2010. In looking at the column headings, it says, "Influent Totalizer." What's your understanding of what

that means?

A. That is a flow meter that measures the number of gallons of flow that flows past it, like an odometer.

Q. And then it says, "Influent Flow, MGD"?

A. That means "million gallons a day."

Q. Okay. Next column says, "RAS Totalizer." What does "RAS" stand for?

A. I think it means "Return Activated Sludge."

Q. And then it says "RAS Flow, MGD"?

A. Yeah, that's just millions gallons of day of return activated sludge, recycling the sludge.

Q. And what is "sludge"?

A. It's the stuff that gathers on the bottom of your clarification ponds, your treatment ponds.

Q. And then next is "WAS Totalizer."

A. That's "Waste Activated Sludge."

Q. And then "Effluent Totalizer."

A. I believe that's the measure of the treated water coming out of the treatment plant.

Q. Okay. So, for example, if I was to look at May 1st, 2010, there was 536848 gallons that went through -- into the plant?

A. No.

Q. Okay. Explain it to me.

A. That is the meter reading on May 1st before

anything went into the plant.

Q. Oh, I see. And then what's the next day?

A. Day 2 is a higher number, so you have an additional number of gallons going past that point.

Q. So it actually increases with each passing day?

A. That's right. And the influent flow numbers, you get in million gallons a day. Like for instance, the 1.76, you take the second day's reading, 538612, subtract it from 536848 and you divide by 1,000 and you get 1.76 as your million gallons a day -- I'm sorry, divide it, yeah. I think these meters are in thousands of gallons, I believe.

Q. Okay. And then if we go over, there's an "Irrigation" column.

A. Correct.

Q. And that would be the flow that is going out to an irrigation system?

A. Correct.

Q. And then there's "Creek Height" and "Creek Flow," correct?

A. Yes, they have a hydrograph for the depth of water in the creek. I think that's what they mean by "creek height." You have a certain flow for that profile, and so the higher the creek height, the larger the flow. And then they just go to that chart and record

that creek flow number.

Q. Okay. Did you receive any other data from the City of Willits regarding the sewer plant operations that were provided to you by the City of Willits as opposed to Mr. Neary?

A. Yes. I wrote another letter requesting more information.

Q. Okay. And what did you get?

A. And I believe I got the -- from -- I've forgotten exactly what I got, but I got enough to complete the entire record to December of 2013.

Q. Okay. And is that what you're holding?

A. Yes.

Q. Do you know why the format is so different?

A. Different than what?

Q. Than page 1 of Exhibit 173.

A. Well, these are just the reporting of their meter readings for one month. That's the spreadsheet showing -- taking this data for all the months of record that I had and computing the actual average million gallons a day, turn that into million gallons a month by multiplying that figure by the number of days in a month and doing that for the influent, the effluent of the treatment plant, the flow to the creek and the flow out to the irrigation.

Q. Okay.

A. And niggling the numbers to come up with the differences.

MR. CROWLEY: Did you create the document?

THE WITNESS: Yes, I did. I made that.

BY MR. BARTOLOTTA:

Q. So this is your work?

A. Yes, it is.

MR. CROWLEY: I thought that there may have been some confusion as to whether he got that from the City of Willits.

THE WITNESS: No.

BY MR. BARTOLOTTA:

Q. And this other page, is this a continuation or is it the same thing?

A. Another copy just marked up.

Q. Okay. I'll tell you what. Why don't you give me your marked-up copy and I'm going to go make copies of it and I'll give you the original back.

A. Just make sure it's the same copy. Do you have a 141 down at the bottom there in bold?

Q. No.

A. You're right. This is the one you want. I'll explain the difference. That's the one you want.

Q. Why don't you give us both.

A. This doesn't make sense because I tried a trick here and I've got to explain that to you.

MR. BARTOLOTTA: Well, I'd love to talk to you about a trick.

THE WITNESS: All right.

(Off the record.)

MR. BARTOLOTTA: Okay. So let's talk about these in the order that I have them right now. I'm going to mark them first -- why don't we go ahead and mark this first one.

(Deposition Exhibit No. 174 was marked for identification.)

BY MR. BARTOLOTTA:

Q. We're looking at Exhibit 171. I'm going to mark them 171-A, B --

A. Is that A?

Q. Yes.

A. What's B?

Q. Don't get so excited here. C is the back of one of these pages.

A. Oh.

Q. And then D. Okay. So explain what Exhibit 174 is to me.

A. It's 174, not 171?

Q. Correct.

A. I wrote it down 171. D -- it's best to start there -- is just the accounting of the influent/effluent from the treatment system from May '10 to May '11, the effluent, EF-1 is from the old plant and then in June of '11 it goes to EF-2 which is from the new plant.

Q. Okay.

A. But the influent, the first column, the date column is the influent of the plant.

Q. Okay.

A. And then each meter reading, the influent, for instance, has the average million gallons per day per date.

Q. Okay.

A. And then the next column is million gallons a month for that month. And that's gotten by taking the average million gallons a day for that month times the number of days in the month.

Q. So if I'm looking at Exhibit 173 --

A. Yes.

Q. -- you took this number here, 1 point --

A. They have an average number at the bottom of the page.

Q. Okay. So you took the average, which was 1.52, for the month of May 2010?

A. Well, I actually used the number on the second

page, I believe. Maybe I -- yes. There's a better number, 1.525. I think I took that average.

Q. I'm sorry. Say that again.

A. They only have it as two decimal places, 1.52.

Q. Okay.

A. And I actually averaged it and got 1.525.

Q. Okay. Then you multiplied that by the number of days in the month?

A. Right.

Q. And come up with the millions of gallons per month?

A. Right.

Q. Okay.

A. And I did that for the influent. That's the first two columns, average millions gallons per month. Effluent from the old and new plants, the next two columns. And then they have "Discharge to the Creek" from October -- "01 October to May 14th" from their meter readings for creek irrigation, EF-3 I think it is. And the same technique, average million gallons a day and million gallons a month.

Next column, "Discharge to Irrigation" permitted fifteen days for October or when appropriate. Same thing. And then the rest of the spreadsheet beyond that to the right are computed numbers based on the

foregoing million gallons a month columns.

And so I wanted to find out how much of material went into the ponds. So what I did, even though I could tell by the meter readings that the water went from the treatment system, exited from the treatment system directly into the stream, I wanted to make sure I didn't lose anything. I wanted to account for that. So I routed it to the ponds and then I immediately took it out of the ponds to show it went -- let's say from the ponds, for instance -- for instance, on 6/11, because that's -- I didn't do that for the existing plant because the ponds weren't there. So you go to the line 6/11 when wetland ponds began operation in June '11. Discharge to irrigation in that month was 30 million gallons a month, so I said I'm going to put all that into ponds and I'm going to take it out of the ponds.

Q. Okay.

A. Okay. And so I have nothing in the ponds. Cumulative ponds is zero for that month.

Q. All right.

A. Same with the next month, July, August. 24 for July went into the ponds, came out of the ponds.

Q. Okay.

A. August, 20 went -- was irrigation that went into the ponds, come -- went to the ponds, came out of

the ponds.

Q. Okay.

A. And then same thing happened through October. So November.

Q. You skipped to November 2011?

A. Yeah, they can't discharge to irrigation because only to September. So I have EFF-2 is 21, put that on the fourth column under the EF-1, EF-2.

Q. I'm sorry; you're looking at November or October?

A. This last column, November. The white space below irrigation, "discharge to irrigation," the first white space (indicating). Right here.

Q. Yeah, that's October, not November.

A. I better go with a straight line too. There we go. Okay. I was cockeyed. We want October.

Q. Okay. I'm looking at October.

A. So we have 21 million gallons coming out of the treatment system.

Q. Correct.

A. And we have 21 million gallons going to the pond.

Q. All right.

A. Because there is no discharge to creek and there's no irrigation.

Q. Okay.
A. The only place it can go is the pond.
Q. Okay.
A. So now I have 21 million gallons in the ponds --
Q. Okay.
A. -- as of the end of that month. And then we go to November of 2011, we have 22 million gallons coming out of the treatment system. It can only go to the ponds. It didn't go anywhere else that I could see, so we've added 21 and 22 and got 43 million gallons in the ponds.
Q. All right. Same --
A. Same thing happens in December.
Q. Right.
A. And 15 more million to the ponds.
Q. Okay.
A. And then in January, the creek is high enough, we've got 25 million gallons coming out of the treatment plant. And then I'm assuming that -- I want to make sure I have the accounting of ponds correctly, so I say let's put 25 million gallons into the ponds, take 17 out because that's what was lost by irrigation, according to the -- discharge to creek, excuse me, right?
Q. Right.

A. So the storage in the ponds did not increase by 25, it increased the difference between 25 and 17, so it now holds 67 million gallons.

Q. Okay.

A. And I did the same thing -- and then in February 2012, 35 million gallons from the treatment system, 35 million is in the ponds, 35 million is out of the ponds, the ponds remain unchanged because the 35 million went to discharge to the creek.

Q. Right.

A. And you go to 3,000 -- I'm sorry; where am I? March, 30 million gallons from the treatment system, 30 million into the ponds, 70 out of the ponds because the discharge to creek was 70.

Q. Okay.

A. So what's remaining in the ponds is 26.

Q. Right.

A. And then April is the same thing; 60 comes out of the treatment system, 60 goes into the ponds, out of the ponds by discharge to the creek and they still have 26.

Q. Okay.

A. That's the whole sequence of this thing going down. I did the same thing for irrigation, instead of when irrigation starts, then they irrigate.

Q. Okay.

A. But I always route it into the ponds first so I don't lose track of what goes into the ponds. It makes sense, the accounting is correct, so I didn't lose what goes into the ponds.

Q. So by the end of this December 2013, there's 141 million gallons in the ponds?

A. That's by my accounting that should have been in the ponds.

Q. Okay. Was it --

A. No, because the ponds only hold 87 million gallons.

Q. Okay.

A. Total. That's full. They're only permitted to have half of that capacity.

Q. Okay.

A. So where did the water go? I can't think of any place but leakage.

Q. Okay. Is there a possibility that the meters are incorrect?

A. Sure.

Q. Okay. Did you do anything to determine whether the metering information that you obtained was accurate metering information?

A. No.

Q. What would you need to do to do that?
A. Have an expert. I'm not an expert in metering. Have an expert and check the meters by another method and make sure they're correct.
Q. So you're assuming that the information provided from Willits regarding the amount measured by the meters is accurate?
A. Yes.
Q. And so in terms of the leakage, this is leakage that would have been from the storage ponds after treatment; in other words, the wetlands?
A. That's correct.
Q. Okay. Did you see anything upon your visual inspection of the wetlands that would indicate leakage?
A. Yes, as I mentioned before, that aura of greens were outside a 20-foot perimeter, let's say.
Q. Let's say --
A. All around it.
Q. And you have photographs of that which have been provided to me?
A. That's correct.
Q. Okay. Any other evidence other than the increased growth in the vegetation?
A. The low levels in the pond. Every time I visited, it was really low.

Q. And so in terms of leakage, did you see places where there was any kind of break in berms or anything physical like that?

A. No.

Q. So in terms of leakage, have you drawn any conclusions as to whether this is leakage that's occurring from the bottom of the pond because of inadequate compaction or lining versus some other physical defect in the ponds?

A. I hadn't thought about the difference between through the embankment and through the bottom of the ponds until just now, but I do have an opinion on that.

Q. What is your opinion?

A. The embankment must have been compacted to engineering standard. You could not put uncompacted fill in the pond. You have to compact them, and that would reduce permeability. But the bottom of the ponds, as far as I understand it looking at the construction drawings, were not compacted or lined.

Q. Okay.

A. So whatever that soil is, and I think it's Yolo loam, would be the permeability -- it would have the permeability of Yolo loam, which is the silt/sand mixture, not a clay.

Q. Have you reviewed any of the pleadings in this

case? Have you reviewed --

A. I'm sorry; reviewed the what?

Q. Pleadings. Have you reviewed the First Amended Brooktrails Township Cross-Complaint to the City of Willits First Amended Cross-Complaint?

A. Not to my knowledge.

Q. Okay. So I believe one of your opinions stated was that there is an increase during rainy season because of rising groundwater and that this increased the infiltration of the amount of water going into the system?

A. Into the sewage collection pipes.

Q. Okay. What's the basis for that opinion?

A. No other possibility.

Q. You've eliminated all other possibilities?

A. I can't think of any other possibility.

Q. Okay. Have you obtained documents regarding the City of Willits' collection system?

A. No.

Q. Did you ask for any?

A. No.

Q. Why not?

A. I wasn't asked to. It wasn't my charge.

Q. Well, first of all, why were you asked to look -- were you asked to look as to whether there was

infiltration in the Willits' collection system?

A. No, I was not.

Q. Were you asked to look at the collection system for Brooktrails?

A. No.

Q. Have you obtained any information regarding the collection system for Brooktrails?

A. No.

Q. And when I say "collection system," I'm talking about the system of sewer pipes that exists under each of these municipalities. You understand that?

A. Yes, I do.

Q. What information do you have about the current condition of Willits' collection system?

A. None.

Q. Do you know how old it is?

A. Let me rephrase that. I have flow information, effluent coming into the plant during the rainy season, which is often three to four times what it is in the dry season. The only mechanism I can think of to cause that rise would be more water coming into the pipes, and the only reason -- only place I can see that coming from is groundwater leaking into the pipes. And in the rainy season, groundwater is high.

Q. Okay. In terms of a data point in support of

your opinion, you have inflow into the system during rainy season and inflow during dry season?

A. That's correct.

Q. Do you have any other data points that you are using to arrive at that opinion?

A. No.

Q. And is the inflow data that you have distinguished between inflow coming from Willits versus inflow coming from Brooktrails?

A. No.

Q. So it's inflow from both Brooktrails and Willits?

A. That's my understanding.

Q. And what have you done to eliminate the possibility that the Brooktrails' collection system is resulting in the increase of inflows?

A. I was asked to review the Brooktrails metered flow. They have their own meter.

Q. Okay.

A. And verify there's a certain percentage of the total flow, so I know they have their own meter to measure their own effluent, let's call it. And Chris Neary tells me that they increase their flow in the winter months from, I don't know, 100 million gallons -- I don't know what it is, but it's twice or three times

what it is in the dry months.

Q. What documentation?

A. I don't have any of that. He just told me.

Q. What information do you have to verify the information that Chris Neary told you?

A. None.

Q. What information do you have as documentation to verify the outflows from Brooktrails metering?

A. Chris gave me a copy of the deposition of Thomas Mannatt and the Order and a bunch of other documents to review, and one of those is Brooktrails meter readings on tab 155, one page. I have not looked at that. It's just there.

Q. I'm sorry; what do you mean you have not looked at this?

A. I have not looked at that and computed the flows compared to the flows data I got from Willits, but I have reviewed --

Q. Well, so let me ask you, do you know whether these flows show an increase of three to four times --

A. No, I have not looked at them.

Q. Why not?

A. I wasn't asked to.

Q. Well, you were given the whole deposition?

A. Yes, that's true. And I looked at that, but I

didn't make -- I didn't -- I know it's there essentially.

Q. Okay. And these are meter readings for basically a one-year period? Well, one year and one month. It goes from January 1st to January 1st. Do you know what year this is? It says 2013, but do you know if that's actually 2013?

A. No, I do not know.

Q. Do you know -- have you compared the information in -- Exhibit 155 to the deposition of Thomas Mannatt, M-a-n-n-a-t-t, have you compared this information to the meter readings that you had from Willits?

A. You mean the Brooktrails reading and this document?

Q. Yes.

A. No, I have not.

Q. Do you know what the rainfall totals were for the time period reflected in Exhibit 155 for this deposition?

A. No, I do not.

Q. Do you actually have the meter data from Willits for 2013?

A. Yes.

Q. And in terms of your analysis of the infiltration that's occurring from the Willits'

collection system, did it include 2013 data?

A. Yes.

Q. So in terms of the ability to compare information between Brooktrails' metering system and the metering -- well, strike that.

Do you actually have data of Willits' metering system?

A. Yes.

Q. So coming from -- in other words, from Willits itself as opposed to --

A. No.

Q. Okay. That's what I'm trying to figure out. So basically what you could do is you could look at the inflows into the plant, subtract out what Brooktrails says it's metering and then determine what Willits' inflow is?

A. Correct.

Q. Is there any other source of inflow other than Brooktrails and Willits?

A. No, not to my knowledge.

Q. But you have yet to actually compare and subtract out the Brooktrails' metering from the 2013 inflow data for the plant?

A. That's correct. Solely for Willits residents you're saying? Yes, I have not done that.

Q. Okay. Do you have that in front of you?
A. Have what in front of me?
Q. The inflow data from -- for 2013?
A. That the City provided their data?
Q. Correct.
A. Where would I find that? Is that already marked?
Q. Is it on this sheet by chance?
A. That's my compilation of it. That's not their records.
Q. Even if I'm using your compilation --
A. Yes.
Q. In other words, I'm asking, does this include all of 2013?
A. Yes, it does.
Q. Okay. And before we move on, I wanted to ask you, so the way I did this with Exhibit 174, I marked them A through D. Can you tell me what A is? Maybe you can -- this is page A. Why is this different than page D?
A. I don't -- I have some calculations in pencil on my copy that's Xeroxed on yours. I don't know what that is. I forgot what I did there. I can't comment on that, but the only difference between the D and the A exhibit in 174 is the column for cumulative ponds,

million gallons, on A there's a figure all by itself, 2.1.

Q. Correct.

A. The top of the column, that is what I put the value. What I was trying to do is see what the monthly million gallons lost would be to make the final total in December '13 come out to be around 100,000 gallons. So this 2.1 is a figure I could change. And the spreadsheet formula for the cumulative ponds in the column under million gallons, it takes the formula in Exhibit D, the figure in Exhibit D, and every month subtracts 2.1 million gallons.

Q. So that 2.1 million is a compensation for evaporation and transpiration?

A. Or infiltration. I wanted to see what the infiltration had to be so that the total -- without going too negative in the intervening months, given the data, what it would have to be at a maximum to have 100 million gallons left in the reservoir.

Q. And that would be --

A. That was 2.1. And I could just -- by changing this one number, it would change all the other numbers immediately. I didn't have to reenter it. That's why that's there.

Q. Let me understand and repeat it back to you and

see if I understand it correctly. So Exhibit 174-A is the same as D except for you have entered a number, 2.1, which is under column "cumulative ponds"?

A. Correct.

Q. And that this 2.1 is an amount that is lost in the ponds on a monthly basis through evaporation, transpiration and infiltration through leakage?

A. That's correct.

Q. And that's basically an assumption you made so that you could see what the water levels would look like with the assumption that amount was being lost?

A. How the stored amount would change month to month if it lost that much a month.

Q. Okay. Got it. Now let's look at B. Is B different?

A. B is different in that I did not put a place to store the number, the 2.1, in the spreadsheet. I just changed it in the formula for the cumulative ponds and ran the analysis.

Q. So --

A. So it's embedded in the number. I do not know what number I put in there.

Q. Oh, okay. So if we look at A, you used 2.1; B used a different number, but that's not reflected?

A. Right. And it must have been a smaller number

because what's left at the end of 12/13 is 123 million gallons, not 99 on the 2.1.

Q. Okay. These pencil marks that are over on the column under MGM, what are those, if you recall?

A. I don't recall.

Q. They look like the sum of the amounts bracketed.

A. Could have been. That's a good guess. I just don't know.

Q. Okay. C was actually on the back of your original. I assume these are just some place where you could actually make notations of data?

A. I think that was the document number off the disk that I was able to get the data for the months shown.

Q. Got it. Okay. Other than this Exhibit 155 attached to Tom Mannatt's deposition --

A. Yes.

Q. -- do you have other Brooktrails' metering data?

A. No.

Q. Okay. That's your copy.

Okay. So getting back to the issue regarding infiltration from the Willits' system, you indicated that basically the only way that you can -- the only source of

the increase in inflows that you see would be a result of problems with the collection system in the City of Willits?

A. Yes.

Q. Okay. And --

A. Or let's be fair. If Brooktrails leaks too, because it's combined flow of Willits and Brooktrails, so I would imagine both are contributing during the wet season.

Q. What's the mechanics of how that would work?

A. You've got cracks in the pipe or leaks in the joints in the pipes. And normally if the water level is below, you get seepage coming out of the pipe, not into it.

Q. Okay.

A. And when water is higher than the pipe, it goes into it.

Q. How -- so what you're saying is that there's actually a -- the level of the groundwater increases and gets closer to the surface as there's precipitation?

A. It rises above the elevation, call it, of the pipe.

Q. Okay. And what evidence is there that the groundwater level rises above the elevation of the sewer pipes?

A. I don't have any evidence. The pipes are eight feet deep or something like that. And I've had several monitoring projects where I have groundwater monitoring wells in Willits and often the water is four feet deep going to ground.

Q. And what projects were those?

A. Dave Rupe had a job at -- I forgot the address. Dave Rupe -- can't think of his address, but he's on Main Street in Willits.

Q. Okay.

A. During -- I was asked, I think in -- I forgot when this was, but sometime in the summer to check the water levels.

Q. Okay.

A. And all my sites had been closed, so I didn't have any wells to check the water levels in. So I asked the guys at the Willits Corporation Yard, I think it is, next to the library, if I could just check water levels in their wells. They were like six feet deep or something like that. And then I also checked some wells at the North Coast Railroad Authority site, railroad in Willits on East Commercial, and those are about the same level. This is -- I forget when this was, but it wasn't in the rainy season. It was a little past the rainy season.

Q. Okay. How many miles of sewer line make up the Willits' collection system?

A. I don't know.

Q. What is generally -- I assume that these are gravity fed collection systems?

A. I assume also.

Q. Okay. Do you have any information --

A. I do not know anything about the construction or characteristics or shape of the collection system.

Q. Okay. Do you know anything about the maintenance of the collection system?

A. No.

Q. Do you know anything about the geographical area that it covers?

A. Only to know it serves the City and I know how big the City is. It must go to the City limits, I would assume.

Q. What about Brooktrails, do you know about their collection system?

A. No, I don't.

Q. Do you know the geographical area that the collection system of Brooktrails covers?

A. I don't know.

Q. In terms of the average elevation, does that have any significance in terms of the level -- the height

of the groundwater during rainy or dry season?

A. Average elevation of what?

Q. The land.

A. Generally groundwater tends to be subparallel -- elevation of the groundwater table tends to be subparallel to the topography.

Q. What's "subparallel" mean?

A. It mirrors -- it's not exactly the same distance, but it looks similar in shape to the overlying topography.

Q. Okay. So it would not have a significant influence on the height of the groundwater?

A. Let's say the depth of the groundwater.

Q. The depth of the groundwater?

A. Yes, it will have some, but not a lot.

Q. Okay. Do you know if it has any effect on -- if it makes any difference in this situation?

A. I do not know.

Q. Do you know anything about the soil conditions in and around the Willits' collection system and whether those would contribute to infiltration?

A. No.

Q. Do you know anything about the soil conditions in the Brooktrails' collection system and whether that would affect infiltration?

A. No.

Q. Okay. Would that be information that could be helpful to you to know?

A. No.

Q. Why not?

A. Because you're getting the overflow in the winter because the pipes are leaking. It doesn't matter what the transmissivity of the surrounding soils are.

Q. Okay.

A. In my belief, they're leaking, so you fix them and they won't leak, they won't admit water.

Q. So in terms of physical evidence of leaks in the collection system, you cannot necessarily make a distinction between the Brooktrails system versus the Willits system, correct?

A. Correct.

Q. They both may be having this issue?

A. I assume they both leak.

Q. Okay. Have you ever worked on a project where you were assessing or evaluating the amount of leakage in a sewer collection system?

A. Yes.

Q. When was that?

A. It was a new technique out. They use an electronic method to actually scan for leaks, and I was

present during a demonstration of this.

Q. Okay.

A. In Mill Valley, I think it was.

Q. They would have that in Mill Valley, wouldn't they?

A. They didn't buy.

Q. And when was that?

A. A year ago.

Q. Okay. In terms of the infiltration that's occurring, is there anything that you've come across in your review of documents provided to you that would suggest that the City of Willits or individuals who are agents of the City of Willits knew that there was excessive infiltration into the Willits' collection system?

A. Only from the design documents where the peak flows are much higher than the average wet -- average dry weather flows, which tells me that they anticipated a lot more inflow into the system in the wet months versus the dry months.

Q. And did that document have a statement regarding the level of infiltration versus just the level of outflow?

A. You mean inflow to the system?

Q. Inflow. Sorry.

A. No, just inflow.
Q. There's no documents?
A. The amount of water predicted to flow, you know, the high flows and low flows, that's just the range.
Q. Did you ever see any document or receive any information that provided an explanation for those increases in flows?
A. No.
Q. And so your opinion is that it must have come from a porous collection system because that's the only thing that you can -- basically it's by process of elimination is where you get to that opinion?
A. It's the only thing I could think of that would cause higher flows in the winter versus the dry period.
MR. BARTOLOTTA: Could we take a break?
MR. CROWLEY: Do you want to take a lunch break?
(Lunch break taken from 12:06 p.m. to 1:04 p.m.)
Afternoon Session
MR. BARTOLOTTA: Back on the record.
Q. I kind of want to go back a bit just to make sure I understand what you're giving opinions about and what you're not giving opinions about. And I'm not -- I don't want to review the designation again, but I

understand that your first opinion was that the facility was constructed as designed?

A. It appears to be, yeah, from what I can see.

Q. You're not giving an opinion as to whether there was an overdesign of the system?

A. No.

Q. Okay. Your opinions regarding the hydrology of Little Lake Valley really consists of the types of soils that are there, Yolo loam?

A. That's correct. And by inference from the other discussion, groundwater goes up and down seasonally.

Q. Okay. And then really what we've been talking about, the impact of inflow and infiltration rates both going into the system and outflow of the system?

A. Correct.

Q. Okay. Are there any other subject matters that you understand you're giving opinions on?

A. Yes. Well, you read those sentences of what I'm giving you opinions on. What exhibit is that?

MR. CROWLEY: I have it in front of me.

THE WITNESS: Here we go. "The operation of the Willits Wastewater Treatment Plant in fact and as permitted."

BY MR. BARTOLOTTA:

Q. Correct.

A. All right. We talked about the operation of the plant in fact where I mentioned the variance documents and the documents in support of the variance and the leakage of the wetlands. And I have a comment on "as permitted."

Q. Okay.

A. Okay? And this has to do with the variance granted where they went from 1-to-100 discharge into the creek to 10-to-1 -- or 1-to-10 in the creek. As I understand it, the Board -- Water Board permitted that because Willits said they would drop the concentrations -- the effluent concentrations of BOD and TDS from 30 to 10 milligrams per liter, as well as monitor for total nitrogen, which wasn't being monitored before; nitrogen was not.

And they dropped one contaminant, which is a byproduct of chlorination. I forgot the name of the contaminant, but they no longer have to monitor for that because they were going to UV.

Q. Because UV gets rid of chlorine?

A. It's a disinfectant just like chlorine.

Q. And that's --

A. This is a byproduct of chlorination which isn't going to happen anymore. But what they did is, for both

of those contaminants, they said, "Hey, you've got a ten-milligrams-per-liter limit on the effluent," and the previous pounds per day of that effluent was based on 1.3 million gallons a day at 30. Okay? That's 39 times 1.4 -- right? -- say, gallons of stuff for both TDS and BOD. If you multiply that by 8.34, the number of pounds per gallon, that gives you the 325 pounds per day permitted in the NPDES permit for the old plant.

The new plant used the 30 -- used the 10 for both constituents, milligrams per liter, but times 4 million gallons because that's the new capacity of the plant. Well, that's 40 gallons per day times 8.34 is 334, or something like that, pounds per day of those constituents.

So the new permit allowed them to put more pounds per day than the old permit of those constituents.

Q. Okay.

A. And the tradeoff was -- not much of a tradeoff, but they said, "Okay. Now you can put ten times the amount you used to put in the creek per flow."

Q. Okay.

A. So you went from a dilution factor of 1 over 101 to 1 over 11.

Q. Okay.

A. All right? So you decreased the dilution by a

factor of nine and two-ninths, or something like, 9 times 11 is 99, plus two more is 101. All right?

Q. Okay.

A. Make sense? So that means not only are you putting more BDS -- BOD and TDS into the creek per day, you're permitted to. I'm not saying to do it; they're permitted to, but you dilute it one-ninth as much as previously.

Q. Okay.

A. And the other parameters didn't change their concentrations -- effluent concentrations, so their dilution factor is also one-ninth of what it was.

Q. Okay.

A. So from the stream point of view and the end product environmentally, the new permit is worse than the old one.

Q. Okay.

A. I understand that, as a practicality, you can't put all the water into this slow-flowing creek. I understand why they did it, but you asked me -- the question was my opinion of it. It's worse than it was.

Q. Okay.

A. That's my opinion.

Q. However that is, is your understanding consistent with what's been represented to the Water

Quality Control Board and approved by them?

A. I'm assuming they approved it because it's in the NPDES permit. I don't know the process by which they went through it. All I know is here are the new standards and here's the new dilution ratio.

Q. You don't know what process the approving Board went through to arrive at those conclusions?

A. I assume they read the same report I did, the one prepared to show it wouldn't be a problem. And in that report, as I mentioned earlier, they assumed that the wetlands are going to be full and ameliorating the nitrogen, which hasn't -- five out of twelve months hasn't been ameliorated.

Q. Okay. With respect to the lawsuit between Brooktrails and Willits --

A. Yes.

Q. -- which is the subject matter of this case, are you aware of allegations by Brooktrails against Willits regarding the construction of the ponds and whether they are -- and whether there's defective design or defective construction?

A. I don't know the basis of the suit.

Q. Okay. Do you know who River Watch is?

A. Yes.

Q. Are you also an expert for River Watch?

A. Yes. Not an expert, I've been asked to prepare water balance -- updated water balance.

Q. Okay. So you say "water balance." Can you explain what that means?

A. The spreadsheet I showed you before.

Q. Okay.

A. This spreadsheet (indicating).

Q. Above and beyond preparing that water balance spreadsheet which has been marked as Exhibit 174 --

A. A, B, C, D.

Q. -- have you been asked to do any other consulting work for River Watch?

A. No.

Q. Have you met with anybody from River Watch?

A. Only Jack Silver in a meeting that Brooktrails called. My very first contact with them was Jack and that's all I've ever met. I've been communicating by e-mail with Jerry Bernhaut.

Q. So you actually -- when you say you met with Brooktrails, who did you meet with at Brooktrails?

A. I forgot -- there's a Board member's name. I've forgotten his name.

Q. So you met with a Board member and Jack Silver --

A. And Chris.

Q. -- and Chris Neary to discuss your role as a consultant for River Watch?

A. No. No. Just to go over the data I had already -- I had already assembled as far as getting records from the City.

Q. Okay. I guess my question is, was the work that you did about the infiltration on the output side of the plant related to the dispute between Brooktrails --

A. Yes.

Q. -- and Willits?

A. Yes. Yes.

Q. Okay. And do you understand what allegations had been made between Brooktrails and Willits as far as --

A. No.

Q. -- outflow?

A. No.

Q. Okay. So the work that you've done there that's in front of you, that is based upon metering data that was provided to you through the City of Willits public records request?

A. The data -- the 2013 data and a little bit before that, River Watch gave me that additional data, and then Brooktrails through Chris also gave me that same data.

Q. Okay.

A. And I compared, "Yeah, they're the same data," so that's why this is the same chart.

Q. Okay. And do you have any understanding as to whether River Watch has actually filed suit against Willits?

A. I don't know.

Q. Have you been paid by River Watch?

A. Yes.

Q. And so you've received compensation which shows up on --

A. No.

Q. -- this?

A. No, those are only the Brooktrails.

Q. So this invoice here --

A. That's all Brooktrails.

Q. Let me make a quick copy of this.

A. You can have that if you want.

MR. BARTOLOTTA: I'm going to mark it as an exhibit.

MR. CROWLEY: Okay. Fine.

(Off the record.)

MR. BARTOLOTTA: Mark that next in order.

(Deposition Exhibit No. 175 was marked for identification.)

BY MR. BARTOLOTTA:

Q. 175 I've marked is your invoices, and these are the amounts billed for the lawsuit we're here for today, correct?

A. I don't know if at the time I was doing this work there was a lawsuit, but this is the work I've done for Brooktrails.

Q. But you've also billed work directly for River Watch?

A. Yes, apart from these.

Q. Okay. And those bills, do they go to River Watch or do they go to Chris Neary?

A. River Watch.

Q. Okay.

A. I can explain what went on there.

Q. Sure.

MR. CROWLEY: Well, wait a minute. My only concern is I don't know if when you say "I can explain what went on there" if you're talking about your invoices or --

THE WITNESS: No, about the contract, my being hired by River Watch.

MR. CROWLEY: My only concern with that is that --

THE WITNESS: Are we off the record?

MR. CROWLEY: No, we can stay on the record. My only concern about you doing that, and you can choose to answer it how you see fit, is if you've been retained as a consultant, my understanding is, in the River Watch case --

THE WITNESS: Right.

MR. CROWLEY: -- you don't know if a lawsuit has been filed, you don't know if there's going to be a designation of experts, and you may be revealing stuff that would be considered attorney work product information if there's been conversations with you and the attorneys that represent River Watch. And you haven't been designated as an expert in that case, and Lee has asked you questions about it and I haven't objected, but when you say "I can explain what went on there," I just want you to be careful.

THE WITNESS: Well, maybe this will help. Chris told me that Jerry called him and said, "Don can share the information that's developed" --

MR. CROWLEY: Okay.

BY MR. BARTOLOTTA:

Q. Okay.

A. But I got involved with River Watch after -- about a year past after Jack met with Neary, and he finally got on the ball and said, "Hey, can I hire" --

"Do you mind if I hire Don to finish the" -- "update the water balance," which is what you see in front of you, the updated water balance.

Q. Okay. So let me go through this. We've marked as 174 your invoices -- I'm sorry --

A. 175.

Q. -- 175 are your invoices. Your first entry on October 25th, 2012:

> "Photograph ponds and embankments, calculate freeboard in three ponds and e-mail titled photographs to Chris Neary."

A. Uh-huh.

Q. How did you get access to the ponds and embankments?

A. I just walked in there.

Q. Did you have permission to do so?

A. Chris said I did. He said, "You're an agent of mine and you have free access."

Q. So Chris Neary gave you permission to access the Willits' treatment property?

A. Right. Right. Right. As an agent of Brooktrails or whatever he calls it.

Q. How long were you on the property when you did these photographs?

A. Two hours maybe.

Q. Okay. Were you walking around the plant?
A. Yeah, I live maybe half a mile from the plant, on the same road as the plant -- sort of the same road.
Q. Did anybody say anything to you about --
A. No.
Q. -- you walking around?
A. There was nobody around. I came in the stream, walked around and went home -- walked off to the field and went home.
Q. Well, at this juncture, were you photographing just the ponds and the embankment or were you actually on the plant property photographing plant equipment?
A. Oh, no, I never photographed plant equipment.
Q. The photographs that are in what you provided to me, where do those come from?
A. That was a subsequent visit.
Q. Okay.
A. Much later.
Q. Okay.
A. A year later.
Q. Okay.
A. Where Chris asked me to go -- because the plant was constructed and operating and he wanted to see what it actually looked like. So I met JC and his helper -- I forget, Nicky or something like that -- and I just, you

know -- "Can I take pictures?"

"Sure."

So I took pictures of the ponds and the UV building, all that stuff, laid out in the plant.

Q. You calculate freeboard in three ponds. What does that mean?

A. Freeboard is the amount of remaining height that the water can rise to before it overflows. So if a pond is ten feet deep and it has two foot of water, you have eight feet of freeboard.

Q. And how did you go about calculating that in this case?

A. By looking at this photograph here. You can see that that's a picture of the weir structure and one of the berms across. Based on this geometrical projection, I calculated that.

Q. Okay. And those are your handwritten numbers?

A. Yes, that's correct.

MR. BARTOLOTTA: I'm going to mark that next in order. It's a photograph -- actually, there are three photographs.

(Deposition Exhibit No. 176 was marked for identification.)

BY MR. BARTOLOTTA:

Q. Can you explain what these three photographs

are?

A. The first is -- I don't know if it's the first and second pond, a median, or the second and third. I don't know which it is. But it looks like I have -- you can see these projections across the weir structures, those straight lines. And I have 13 inches. That's the measured distance between the top rail and the bottom rail. And so I calculated what the actual freeboard was. It looks like seven and a half feet, because I took the top of the pond to be the top of the concrete structure.

Q. Do you know if, in fact, that top of the concrete structure is the top of the pond?

A. No, but it sure looks like it from -- because you can see the top of the berm on the other side by following that median all the way around, and I noticed they were all the same elevation when I walked around. Didn't have to step down to go over there.

Q. Did you confirm any of this with respect to looking at design plans or was it based upon what is in this exhibit?

A. I don't know, but I did have a copy of these things, the design plans, and it doesn't show any elevation difference in the median and the berm.

Q. What is the second page?

A. I think that's another -- another estimate from

a different view of the same data.

Q. And so these photographs were taken in --

A. I don't know.

Q. -- October 2012?

A. Yes. Yes. I was going to say -- yes, that's correct.

Q. And what's the significance of these findings in terms of the freeboard and the three ponds as calculated by you?

A. Well, the ponds are -- they have between 6.3 and 7.5 feet of freeboard depending on how you look at the calculation.

Q. And what does that mean? I mean, what relevance does that have to your opinions?

A. At the time I didn't know, but I now think it should have been higher.

Q. So let me ask you, did you do these calculations at the time the photographs were taken or did you do the calculations at a later date?

A. Well, as my -- I photographed the ponds and embankments and calculated -- so it's probably the same day.

Q. Okay. And I'm going to be asking obvious questions.

A. Yeah, okay. That's fine.

Q. But that's my job because you're an expert and I have to do that.

Okay. Next you said "Review WWTP design plans."

A. Yes, these are -- you have some exhibits here. This was -- Chris gave me a PDF file with all the construction plans.

Q. Okay. Next you have:

"Review NPDES permit, compute wetlands capacity, review photographs taken on 10/3/12 in sample location No. 2, and meet with Chris Neary."

A. Right.

Q. Okay. What is "compute wetlands capacity"?

A. That is shown, I believe, on this exhibit here (indicating).

MR. BARTOLOTTA: Okay. So we'll mark that next in order, and it's an Enhancement Wetlands Site Plan with handwritten notations.

(Deposition Exhibit No. 177 was marked for identification.)

BY MR. BARTOLOTTA:

Q. Okay. So can you tell me what Exhibit 177 is?

A. That is a to-be constructed view of the wetlands. And my -- and I have three ponds that are

separated by the weir structures and the barriers. And it shows the calculation of the scale in the area and then scaled up to what the actual feet were. It looks like one -- if you look on the first pond where it says "Cell 1" --

Q. Uh-huh.

A. -- there's a 100-foot notation there.

Q. Correct.

A. If you come down -- straight down there, you can see two lines that follow the sides of that and it has -- it says 0.3 feet -- sorry, inches. So that distance on paper is .3 inches. That means 100 feet divided by .3 inches is one inch equals 333.33 feet so I could get the scale on this so I could work with a ruler instead of trying to estimate.

Q. Did you actually receive something bigger than this?

A. No, this is it.

Q. And so the eight by ten sheet of paper is what you received; you didn't receive a full-sized as built -- or to-be built plan?

A. That's correct.

Q. So then based upon your measurements, you calculated the potential -- the volume in each pond?

A. I calculated the area.

Q. Right.

A. And then I multiplied by ten feet because that's the design height of the embankment. And I got about, as I said there, 800 -- about 85 million gallons. That's 84.

Q. What's the .3 on the side there?

A. That's the distance on my scale that this 100 feet makes.

Q. Okay.

A. And that's how I got the one inch equals 333.

Q. And then the calculations where it's A1, 2 and 3, those are separate calculations for each pond?

A. Right.

Q. Then why is the total at the bottom 1,133,000?

A. That's the number of square feet.

Q. That's the number of square feet?

A. And you'll notice I took the area of the bottom of the ponds, not the top.

Q. Okay. Are the -- is there a difference?

A. Yes, because what I did next is multiply by ten feet -- that area times ten feet. So I discount any volume gain by the side sloping as you come up. So the bottom of the ponds have that area.

Q. Right.

A. Right? Assuming the sides were vertical --

Q. Right.

A. -- and held ten feet, that's the capacity I calculated.

Q. Okay. And in terms of the slope of the banks increasing the volume, how much variance would you estimate there would be?

A. Five percent maybe.

Q. Have you compared your calculations to any design specifications that were provided to you representing what the anticipated volume of the ponds would be?

A. Yes. They say the total area of the ponds is about 27 acres -- 27 acres.

Q. 27 acre-feet?

A. No; acres.

Q. Okay.

A. I've got to get my calculator. So if you take 27 acres times ten feet, that would be 270 acre-feet. 27 ten times, 270 acre-feet. There are 43,000 -- 43,560, I believe, square feet in an acre. Okay? That's 11 million cubic feet.

Q. Okay.

A. Cubic feet now, times 7.48, that's how many gallons in a cubic foot.

Q. That's basically consistent with your --

A. I've got 87 thousand -- 88 million gallons.
Q. So with a possible five percent increase in your calculation to account for the slope on the banks?
A. It pretty much matches, yeah.
Q. The amount that's represented and the amount --
A. Yeah. There's no question that they're correct in their volume, yes.
MR. BARTOLOTTA: Another undisputed fact.
MR. CROWLEY: The case should settle.
BY MR. BARTOLOTTA:
Q. Okay. If you turn the page, the public records request that is outlined or discussed on November 19, 2012, is that the one that we reviewed where you asked for the flow data?
A. Yes.
Q. Okay. So go to the -- it's the invoice for February 2013. There's an entry on January 25th, 2013.
A. Invoice for February.
MR. CROWLEY: Invoice No. 3072.
THE WITNESS: Oh, 2013. Sorry. Yes, I was thinking the day, not the year. Sorry.
BY MR. BARTOLOTTA:
Q. The description of your work is:
"Discuss with Chris Neary information that I should provide to Chris regarding

completeness of City response to two letters..."

I assume that these were public request letters?

A. Yes, I believe so. Yeah.

Q. Okay.

"...and conflicts within CAO regarding discharge to groundwater."

What does that second part of the sentence mean?

A. It's the cleanup and abatement order, I believe. But it may -- I think it's -- I think that was the cleanup and abatement order, the one that they said -- I'm not sure that should have been the NPDES permit or not. I think I was referring to this document, the NPDES permit. I'm not sure. I'm not sure. As you said, if I don't know, say I'm not sure.

Q. Okay. If I turn the page, we're now on the March 1st invoice.

"Review SMRs again in light of second response from City of Willits."

What are SMRs?

A. Self-monitoring reports.

Q. Okay. And you then continue:

"Review SMRs and modify effluent and

discharge flow spreadsheet."

A. Yeah, it was confusing, the data they were giving me. I couldn't make sense of it. I didn't know what went where. It was very confusing --

Q. You mean --

A. -- from what they gave me.

Q. So the information that they provided to you, you were comparing it to what?

A. Nothing. I was trying to make internal consistency of it.

Q. Okay. But internal consistency with respect to other information that they had already provided you?

A. Yes. Yes, the whole package.

Q. And were you able to do that eventually?

A. Eventually, yes.

Q. Did you find consistent -- inconsistencies between the flow rates that were provided and discussed in Exhibit 163 and the SMRs that were provided to you?

A. Yes. Those were in the SMRs as part of it.

Q. Okay. And my question is, were they consistent?

A. Yes. Yes. I finally understood it once I knew what was how and where. And I made sure that I directed all the effluent to the ponds first and then distributed where it went.

Q. Okay.

A. I think there was some question about -- the last one on February 28th.

Q. Yes.

A. There was some question about what EFF-1 versus EFF-2 was, and I finally got that straightened out.

Q. Understood. Okay. If you turn the page to the April invoice.

A. Uh-huh.

Q. On March 7th, 2013:

"Meet with Chris Neary and discuss findings regarding infiltration of treated water to groundwater and percent use of WWTP by Brooktrails."

Can you explain what that entry means?

A. Well, I showed him my spreadsheet as then -- at its current progress, and then he asked me to check columns of Brooktrails water metered versus Willits and make sure they're correct in the office.

Q. Okay. Did you receive documentation regarding the metered --

A. I may have. I do not recall. It's not in my file. I don't know where it is or if I got it.

Q. Okay. So you were looking at --

A. It's like a one-page thing, yeah.

Q. You were checking Brooktrails metered inflow, outflow?

A. I was not checking them, I was believing what was written and making sure the calculation was right as a percentage.

Q. Okay. Did you keep notes of that?

A. No.

Q. You then note:

"Check 2011 and 2012 percentage Brooktrails influent to WWTP."

A. Yeah, I must have had a copy now that I see it, but I don't know where it is.

Q. Do you remember what those percentages were?

A. They were about 20 to 25, something like that.

Q. And that was for the entire year?

A. I believe so, because it says "Check 2011 and 2012 percentage Brooktrails influent." Two years, I believe.

Q. Then you have:

"Reviewed flow data e-mailed from Chris and send reply e-mail with July-June 2010 and 2011 percent Brooktrails flows."

A. I did more than I remembered then, yeah.

Q. Did you produce those e-mails?

A. Yes.

Q. Those are part of the production that I have?

A. Oh, no. No. No. No. No, they're not. No, I don't -- I didn't keep them.

Q. You --

A. Maybe I can get them. I don't know if they're deleted or not.

Q. Okay. Could you please look and see if you have those e-mails?

A. I will. Certainly.

MR. CROWLEY: Don, if you have them, call me and let me know or e-mail them to me and I will send them to the -- I'll provide them.

THE WITNESS: Sure. Okay.

BY MR. BARTOLOTTA:

Q. Okay. So now the next page, 5/1/2013 is your meeting with Chris, Jack Silver and Brooktrails Board members?

A. There we go. Yeah, I think there was a lady and a gentleman, Board members.

Q. Why were you having a meeting?

A. Chris asked me to come.

Q. Okay. And what was the subject that was discussed at that meeting?

A. The leakage from the ponds.

Q. Okay. Was there any discussion regarding

anything else other than the leakage from the ponds?

A. Not that I recall.

Q. Okay. Next page, June 2013:

"Reply to Chris Neary's e-mail regarding scope and cost of spray irrigation study."

Is this a spray irrigation study that you were proposing to do?

A. No. It's one required by the Order that was supposed to have been done by November 2011.

Q. Okay. So why were you giving an opinion regarding the scope and cost of that study?

A. Because Chris wanted me to prepare a cost estimate for doing it myself to compare with the bid from the City because I guess his opinion was that whoever Brooktrails -- Willits hired is going to be expensive and maybe I could do it cheaper, thereby saving Brooktrails money.

Q. Okay. And you actually did that, correct?

A. Yes, I did.

Q. So you made a written proposal to Willits to do work for them?

A. Yes.

Q. And --

A. I don't know if it ever got submitted to Willits, but I prepared it.

Q. Well, did you send it?

A. I sent it to Chris. Yes, as a matter of fact, the next month I said I e-mailed it to him.

MR. BARTOLOTTA: Okay. We'll mark that next in order.

(Deposition Exhibit No. 178 was marked for identification.)

BY MR. BARTOLOTTA:

Q. Had you ever prepared such a plan in the past?

A. No.

Q. Okay. At this juncture, were you aware that there was a lawsuit going on between Brooktrails and --

A. I believe I was, yes.

MR. CROWLEY: Let him finish his question.

THE WITNESS: He pauses. He has these pregnant pauses.

MR. CROWLEY: Wait until there's no more pauses. What it does is it makes --

THE WITNESS: It breaks it up.

MR. CROWLEY: And it makes her job really hard because she's trying to get your answer and then his question picks up.

BY MR. BARTOLOTTA:

Q. That's 178. Is that a copy of a letter that you prepared and sent to Chris Neary regarding the scope

and cost of a spray irrigation study?

A. Yes, but it's not spray irrigation, it's the evaluation of the water reclamation system.

Q. Okay.

A. Which involves spray irrigation as part of it.

Q. And do you know whether Chris Neary ever forwarded that to Willits?

A. I do not know.

Q. Did you ever have any communication with Willits regarding doing consulting work for them on that issue?

A. No.

Q. Flip over to September 2013 invoice.

A. Uh-huh. Yes.

Q. States, quote:

"Research Geotracker for UST sites at which monitoring wells are still present to allow water level measurement to be made."

What's -- can you explain what that means?

A. Chris asked me to measure the water -- groundwater depth in Willits as of August. Formerly I had a whole bunch of sites in Willits that I had monitoring wells that I could go to and measure, but mine were all closed. I had no wells. So I went to Geotracker, which it shows you -- if I type in and search

"Willits, California," it pops up with a map showing the UST sites that are still active.

Q. What does "UST" mean?

A. Underground storage tank sites, which means they have monitoring wells around them. So I found one at the City Corporation Yard and one at the NCRA depot, rail station.

And so it says I measured MW-6 at the Willits yard and then I got permission from their staff at the Corporation to measure one of their wells, several monitoring wells.

And then I went and looked at Geotracker again to look at the reports for the Willits yard and looked at their hydrographs for their previous ones and they were within the range of the seasonal variation. They weren't high or weren't low.

Q. Okay. And this was done obviously towards the end of the dry season?

A. Yes. Because apparently Chris said that the flows were unseasonably low.

Q. The flows from the --

A. Into the City, into the plant.

Q. Okay. Is there an explanation for that or did you verify that that was an accurate representation?

A. Yes. They're pretty low. Based on -- this is

2013, right? So based on my spreadsheet, it's -- it's pretty low compared to all -- all the yearly records.

Q. Have you done any other water level measurements in other times of the year other than those that are done here?

A. Not for Chris Neary and not in relation to this project.

MR. CROWLEY: Well, I don't want to -- I'm not sure if his question was limited to this case or this project, to use your words. If it was, then you may have answered it. I interpreted his question to be broader than that.

THE WITNESS: Could you repeat the question?

BY MR. BARTOLOTTA:

Q. Sure. In relationship to your work in this action, have you checked --

MR. CROWLEY: Okay. You're right.

BY MR. BARTOLOTTA:

Q. -- the water levels at any other time of year?

A. No.

MR. CROWLEY: I misunderstood.

MR. BARTOLOTTA: That's fine.

Q. Do you have any data that suggests the level of increase, if any, that results at these two specific well sites during wet weather season? In other words, you

have:

"Measure water level as 8.17 feet from top of casing in MW-6 at NCRA Willits yard."

I assume that that's the depth at which you hit water level?

A. That's correct.

Q. And that was done in August of 2013, correct?

A. Correct.

Q. And have you done anything to determine the increase in the water level that results by testing in January or February or at some point when it's been raining?

A. Yes. And I checked for the City of Willits Corporation Yard.

Q. Okay. So that's the second one, correct?

A. Right. And I looked there because they have pretty good records. There hadn't been any work done on the NCRA site for a long time.

Q. Okay.

A. So the City of Willits has a very good history on Geotracker.

Q. Okay.

A. So I went to their latest monitoring report. I don't know who the consultant was, but they're posted there.

Q. Right.

A. And it shows you, part of the -- you've got to show a graph or tabular form what the historic water levels are throughout the year.

Q. Okay.

A. And when they used to monitor quarterly, it would be January, March, June and September and so forth. So I looked at that and I looked at the depth here, and it was right in the middle of the variation.

Q. Okay.

A. They were three feet; they were nine feet. So this was not unusual for this time of year. I looked in August, what the variation throughout the years in August was, and this was not high or low.

Q. Okay. And my question is, let's look at that particular site, did you do anything in relation to your work on this case to calculate what the difference is between dry season and wet season?

A. No. All Chris asked me to do is say if it's abnormally low or abnormally high.

Q. For that time of year?

A. Yes.

Q. You then say:

"Expenses, rental of company-owned water level meter used on August 13-14."

A. I have a water level meter, electric meter. It's a tape with a sensor at the bottom. You lower the tape down and the two contacts at the bottom make contact with the water, the circuit is completed, the bell rings or the buzzer rings at the top so you know you hit water. That's how you measure water levels in a monitoring well. And there's a designated top of casing notch you measure from. It's set, surveyed, so I was able to compare depth to depth.

Q. Okay. Did that information you obtained doing those measurements affect your opinion regarding the infiltration from Willits' collection system?

A. I don't understand the question.

Q. In other words, the information that you obtained regarding the depth of the water in August 2013, did that support your position one way or the other regarding the infiltration from the collection system?

A. I have no position. All I'm relying on is the data that Willits gave me --

Q. Okay.

A. -- to tell me the inflow to the plant. That's all I relied on.

Q. Sure. And I'm trying to just figure out, I mean you basically have said that your opinion is that the inflows to the plant are caused by cracks or gaps in

the collection system overall, Brooktrails and Willits, right? You can't really distinguish between the two. And so my question is, is I'm trying to figure out, is there anything that you did independent of your calculations to verify that it's a collection system issue in terms of the volume during wet season?

A. No.

Q. Okay. So let me ask it this way. Are you making the assumption that this collection system, assuming it was perfectly maintained and perfectly constructed, that there would not be an increase or decrease from wet to dry season; in other words, a closed system?

A. Yes.

Q. Are there any variations that can occur from dry weather to wet weather because of use of the system?

A. Use of the system means that if you get increased flows in the system, more septage is being created.

Q. More what?

A. Septage, more water -- more water to treat, solids and so forth. That can only come from humans. So unless there's an uptick in that kind of activity, that's the only reason I can see an increase in flow. And I don't see any reason for that uptick of activity over

months.

Q. So let me just kind of understand this. So in terms of the inflow into the plant, it's either going to be increase in human usage?

A. Correct.

Q. Or that there are leaks in the system that are allowing groundwater to get into the system?

A. Correct.

Q. Any other third, fourth possibility to account for the increase in flow?

A. I can't think of any.

Q. Okay. How much increase in flow is there?

A. Three times from -- about three times.

Q. Do you actually have the numbers that it goes from this to this?

A. The City has the numbers.

Q. Okay. But do you have them in one of your exhibits?

A. Yes. Exhibit 174.

Q. Okay. I have Exhibit 174. I just have to find mine.

So you're looking at a particular section on the page. Can you tell me what you're looking at?

A. It's just past the date column, the "Influent" "Average million gallons a day." We can either look at

the average million gallons a day or the million gallons a month. It's more instructive to look at million gallons a day because that takes the bias about the number of days in a month away.

So if you look at, for instance, December of 2012 --

Q. Yes.

A. -- 3.279 million gallons a day average.

Q. Right.

A. And you go back to August of '11, .678. And you'll notice that if you go from August, September October, November, it gets bigger and bigger and bigger as you get toward the winter. And the highest there is January of '12, which is 2.7, which is more than three times the stuff in August.

Q. I'm sorry. I missed where you're looking at.

A. 12/11.

Q. Yes. 12/11.

A. 1/12. I'm sorry.

Q. 1/12.

A. Yes. That's the highest of that series, 2.714.

Q. Okay.

A. And then you go back five months or four months to August of '11.

Q. Right.

A. It's .678. So from the end of summer to the rainy season, it's increased by four times, about. A little less than four.

Then if you go to July of '12, 7/12, it's .82 and then it really increases to 12/12 to 3.27. That's about a fourfold increase as well.

Q. Okay.

A. That's why I think that the groundwater rises, the pipes leak, more flow goes into the sanitary sewer based on this data alone.

Q. Have you done anything to correlate these calculations with precipitation?

A. No.

MR. CROWLEY: It's a belated objection. When you use the term "these calculations" --

MR. BARTOLOTTA: I apologize. The calculations on Exhibit 174-A.

MR. CROWLEY: Well, my objection was, I didn't know that he'd actually calculated these amounts versus it was from data provided by the City of Willits.

BY MR. BARTOLOTTA:

Q. Okay. Are you aware of the rate at which the depth of groundwater increases or decreases?

A. In a general way, yes. I mean, if you get a really heavy rain, three or four days later, you've got

water levels that are much higher.

Q. And how quickly does that dissipate?

A. About the same time it took to rise. It stays a while. Actually, it rises -- I don't know. I can't say with precision.

Q. In terms -- still looking at that Exhibit 174-A, for July of 2012, you have this -- it says:

"E&D meters out, used average percent, INF-1 of June '10 and '13."

A. Yeah, the meters were out so I had to average them. So I picked the same month in the two years and I averaged those.

Q. And then the same thing with July?

A. Yes.

Q. You did that --

A. Yeah, I used the same number as July '10. However, if we want to use the .82 number because it wasn't recorded but just estimated, and I had to estimate it to complete the worksheet, to keep the monthly tabulation going. If we go to October of '12, it's .673. Two months later it's 3.279. That's like five times, four and a half times, in two months.

Q. Right. But you also don't have any information as to whether there was precipitation that would have

resulted in the groundwater level increasing, correct?

A. No. No.

Q. Okay. I mean, I'm just -- correct? In terms of -- well, let me ask you, have you reviewed any information wherein -- well, strike that.

Did Chris Neary ever tell you that Willits had understood there was an increased flow as a result of defects in the collection system and that this information had been withheld from Brooktrails during negotiation --

A. No.

Q. -- on the cost of the plant?

A. No, I have no knowledge of that.

Q. Okay. The information that you have in Exhibit 174-A, did you get information from an earlier date going back before May 2010?

A. No.

Q. Was the information that you collected or had available to you from the earlier plant consistent with the pattern in 2011, '12 and '13?

A. They appear to be a lot higher in -- that's two years. Yes, from May '10 to May '11, because the lowest ones are in August, a .71, but the highest ones are still pretty high. March of '11 is 3.469, so generally the pattern holds, but the flows are higher for some reason.

Q. Do you have any data from any date earlier than May 10th, 2010?

A. No, I don't.

Q. Would that be information that Willits would likely have available?

A. I don't know. Chris told me that they didn't have flow meters for like a span of eight years or something like that. And maybe 2010 was the first time they were recording flows. I don't know.

MR. BARTOLOTTA: Take a break for two seconds.

(Off the record.)

MR. BARTOLOTTA: Okay. We're back on the record.

Q. Are you aware of any other data prior to May 2010 that could potentially be used to calculate the same thing you've calculated in 174-A?

A. No. I saw something with flow rates that had -- had, like, '92 or '90 they had flow rates. I've forgotten -- I thought there was like a ten-year span. May have even been 2001, I don't know, where they were missing flow. The meters weren't working. I do not know what happened before that, if the self-monitoring reports are different or whatever. I don't know.

Q. The last invoice I have here is from December of 2013. Do you have invoices that you sent to Mr. Neary

since then, I mean, the last three months?

A. I don't think so. I think I got reactivated, you might say, on this project this month.

Q. Reactivated?

A. Yeah, I believe so. I mean, I thought I checked all my invoices. If I hadn't, if I missed them in 2014, I'll send them, but I thought I did check in 2014.

Q. Did you meet with Mr. Neary in preparation for today?

A. Yes, yesterday.

Q. At his office?

A. Yes.

Q. Nice Easter meeting?

A. Yes, very relaxed. We both said grace and then we proceeded.

Q. You have a note here in your invoice for December 2013:

> "Provide e-mail reply to Chris Neary regarding Mike Phelan's e-mail to Chris Neary."

Do you remember what that is?

A. Oh, Phelan or "Phelan," whatever, he -- I think that was a letter complaining that when I visited the wastewater treatment plant, I was rude and discourteous.

That was news to me. So I said, "Me?" Because I wasn't.

Q. Okay. You know, I had a brief opportunity to look at the documents you produced. I wanted to briefly ask about the photographs that were included in your file that showed the outer slope of the pond berms.

A. Right. It's a view of parallel -- a profile you might say.

Q. Yes.

A. You see the inside and the outside?

Q. Correct. What did those depict that was significant to you in terms of photographs?

A. The water level of the -- in the wetlands in relation to the level of the land outside.

Q. And you had said something about the vegetative growth?

A. Yeah. The water level was about from -- just looking at the picture, about maybe a foot, a foot and a half higher than the growth, the land the growth was occurring on. So I could visualize a flow pattern of water going underneath and coming up in that situation. It was not out of the question that that growth was due to water coming from the wetlands.

Q. Okay. What was it about the vegetation itself that led you to believe that?

A. It's anomalous.

Q. How so?
A. It only exists in one place in that whole area and that's immediately around the embankment on the outside.
Q. What was the type of plant that was growing?
A. Same plants that were next to it but more vigorous and higher and greener.
Q. So your -- that plant growth, that is evidence to you that there is water leakage that is feeding those plants and making them healthier than the plants that are further away from the berm?
A. That's correct.
Q. Any other evidence regarding leakage? We talked about basically the water levels and your computations as to what should be in the ponds and what you found.
A. I'd expected them to be higher if it's a wetlands that are actually storing things.
Q. Okay. And then --
A. To be fair, I could be wrong. Maybe that's the design level. Whatever, I don't know.
Q. Okay. Then the vegetation that's growing on the -- close to but on the outside of the berm?
A. Right.
Q. Anything else?

A. No.

Q. Okay. In terms of the soil compaction within the ponds, do you have an understanding as to what the design plans require?

A. My understanding is no compaction was specified. There was nothing to meet as far as compaction standards in the bottom of the pond, or a liner.

Q. Is there a reason why you understood that was the design plan?

A. Because it was not in the design. I read the design plans.

Q. No; I know, but was there an explanation as to no liner or compaction was required?

A. No. There was no disclaimer saying, "We did not include a liner because..." "We did not compact the soil because..." Nothing like that.

Q. Okay. Do you know anything about the soil conditions in that location and how that would affect or not affect the need for compaction?

A. Yes. It's Yolo loam which is a sand/silt mixture. It's not clay. And it's more permeable than clay.

Q. Meaning?

A. Meaning water will infiltrate readily through

it.

Q. And is there anything that you've seen in terms of the design plans that -- well, strike that.

In what you've read, was there ever discussions regarding placing a liner in the ponds?

A. Not --

Q. When I say "a liner," I mean clay.

A. It could be a plastic liner too.

Q. Okay.

A. Any relatively impermeable liner. No, there was not.

Q. Have you ever worked on a project to address questions of issues related to lining of ponds or reservoirs?

A. I reviewed documents years ago, and this spec was -- the conductivity had to be ten to the minus six centimeters per second or less to qualify as a relatively impermeable liner.

Q. Okay. So I just want to ask you about some of the documents that were contained in the directory and whether they were significant to you. One is an Agenda Summary Meeting, July 24th, 2013 from the City of Willits. This was part of your file.

A. Oh, I think this is where the City contracted them to do a -- yeah, the reclamation study, the work

plan reclamation study that I put a proposal in to Chris.

Q. Okay.

A. That's the first time I've seen that. I think this is what Chris gave me yesterday on his thumb drive which I gave you. I've only had it since yesterday.

Q. Oh, so wait a second. The thumb drive you gave me was actually provided to you by Chris Neary?

A. Yes. Documents on it -- I went home -- from the documents Chris gave me -- there's documents on there. So all the documents besides what's in my folder --

Q. Which is right here?

A. No. No. Folder on the thumb drive. There's a manila folder icon in my thumb drive.

Q. Okay.

A. I just copied my directory over to the thumb drive.

Q. Okay.

A. And all the files with it, right?

Q. Right.

A. So anything outside of that is what Chris gave me yesterday to review before I came here.

Q. And did you review it?

A. Yes.

Q. Okay. Did anything that Chris Neary gave you

to review affect your opinions you're expressing here today?

A. Yes.

Q. Okay. I'm just trying to figure out how to ask you about that if I don't have them in front of me because I don't have just, you know, what you got yesterday versus what you had in your file already.

THE WITNESS: Can we go off the record?

MR. BARTOLOTTA: Sure.

(Off the record.)

THE WITNESS: There was a report that Chris gave me. I forget who prepared it. It was a consulting firm that was not SHN.

MR. CROWLEY: GHD?

THE WITNESS: Oh, GHD. It was a completely third party that was -- they were describing why it would be okay, and under a lot of studies, to go from the 1-to-100 dilution ratio to the 10-to-1 for the creek discharge.

BY MR. BARTOLOTTA:

Q. Okay.

A. And throughout that whole study, they assumed the wetlands were actually holding water --

Q. Okay.

A. -- with some retention time, enough to drop the

nitrogen levels down.

Q. Okay.

A. Right. So their ten parts per million could be met, their criteria could be met. So part of that -- so I realized yesterday looking at that and said, "Wait, they accepted this variance based on this plant acting this way, being operated this way," and I found out it's not operating this way.

Q. Okay.

A. Which is why we have five exceedances of nitrogen in the wet season for nitrogen, double what it should be.

Q. Okay.

A. Should be ten. It's reported once at 22 and four times 24 or something like that. In the twenties. And we only were able to get it down when the flow stopped, the storm water stopped.

Q. Okay. And so what is your explanation as to why those nitrogen exceedances occurred?

A. I believe they didn't keep the water in the enhanced wetlands long enough for that to occur.

Q. And that's because the volume that occurred during wet seasons was too high?

A. It's not too high. They often just dumped it directly into the creek.

MR. CROWLEY: Just for the record, identify what exhibit you're looking at, please.

THE WITNESS: I'm looking at my sheet, 174.

BY MR. BARTOLOTTA:

Q. So I guess what I'm asking is, in other words, the volume of water coming in was too much for the plant to handle in the proper way and so it was being dumped into the creek directly?

A. No. I'm wrong.

Q. Okay.

A. Actually, I'm looking at the influent for 2013.

Q. Okay.

A. In 2013 it's pretty moderate. This is the time in August when Chris asked me to check the water levels in the valley through monitoring wells --

Q. Right.

A. -- to explain if it could be low flow, and they're all pretty moderate flows.

Q. Right.

A. So they were out of compliance for nitrogen in one, two, three -- I think August through December when flows are pretty moderate. So I can't explain that. I don't know why they were high.

Q. Okay. What are the possible explanations?

A. I don't know. I'm not a chemist or I don't

know anything about operating a sewage treatment plant.

Q. Okay. I appreciate that. I know very little myself. Mr. Crowley and I.

MR. CROWLEY: I know less than you.

THE WITNESS: That's really all I learned from review of the documents that Chris gave me.

BY MR. BARTOLOTTA:

Q. Okay. The self-monitoring reports that you received --

A. Yes.

Q. -- I know I just saw a whole bunch of them, those were provided by the City of Willits?

A. Yes.

Q. And was --

A. And River Watch for the year 2013 and a couple months before.

Q. Okay. And those were -- I think you said those were consistent with the data that you were given on the meters?

A. Yes, right.

Q. But basically their self-monitoring would be reading them in meters and writing it down on --

A. That's all they're doing, yes.

Q. And then that's likely what they used to compile the month-to-month amounts?

A. That's exactly what they did. They're their readings, right.

Q. Okay.

A. You better keep that.

Q. I'm going to read some things --

A. What's that? I don't know, is that yours? It got mixed around here.

Q. I don't think so. I think that's yours. I don't want to take something out of the file.

In terms of your ability to obtain records from the City of Willits through public records requests, you did get flow data -- metered flow data for the years you requested, correct?

A. Yes.

Q. And you had indicated that you understood there were metering issues; in other words, problems with the meters themselves for years prior?

A. No. I think metered -- today, they still exist.

Oh, in that connection, there was another report I reviewed that Chris gave me yesterday that talked about the partial flume that meters the influent coming in, and there was an engineering firm that tested it, Brelje & Race. I read their report on that, and they reported it could be off like 10 or 20 percent

underreporting and often not reporting when the water level over this smooth weir surface is less than an inch and a half. So it records zero and there's actually flow going.

Q. So this is influent?

A. Influent.

Q. Coming in?

A. Right, which makes my influent minus effluent for the whole plant -- no; influent minus effluent from the treatment system even bigger than recorded on my spreadsheet.

Q. So that report from Brelje & Race that you reviewed, do you recall what years they were talking about in terms of the metering being off?

A. They said they hadn't changed the flume since the beginning. It's been there. It empties into 36 or some big pipe comes into this catchment and they have the flume right there.

Q. Okay. So I'm going to read a paragraph from the First Amended Brooktrails Township Cross-Complaint.

A. Okay.

Q. It says:

"All times prior to the execution by Brooktrails of the first USDA loan agreement," which I believe was in 2004, "the City of

Willits concealed from Brooktrails the material fact that the City of Willits had excessive inflow and infiltration to the City's collection system."

Okay. Do you have that in mind?

A. Yes.

Q. Okay. Do you have any documentation regarding flow rates that are any earlier than 2010?

A. No.

Q. Do you have any documents that you've seen that would indicate the City of Willits was aware of increased flow rates as a result of infiltration in the collection system prior to 2010?

A. No.

Q. Do you have any information or documents that would indicate that there was concealment by the City of Willits regarding excessive inflow and infiltration to the City's collection system?

A. Prior to 2010?

Q. Yes.

A. No.

Q. And, in fact, the information that you have from 2010 to today was provided to you by a public records request?

A. That's correct.

Q. Was there any indication that they were unwilling to provide that to you?

A. No.

Q. Have you reviewed any documents regarding representations by the City of Willits that it had an active and effective program to control and reduce the inflow and infiltration of water into its collection system?

A. No.

MR. CROWLEY: Lee, what paragraph are you reading from?

MR. BARTOLOTTA: 12.

MR. CROWLEY: Thank you.

BY MR. BARTOLOTTA:

Q. Were you provided any documents from the Regional Water Quality Control Board that required the City of Willits to develop a plan for addressing high water -- high winter flows into the wastewater plant which high winter flows were caused by excessive inflow and infiltration?

A. No.

Q. Have you ever talked to Chris Neary about documents that the Water Quality Control Board had produced regarding issues of inflow and infiltration with the City of Willits' collection system?

A. Not that I can recall.
Q. So in terms of your calculations on 174-A, when I'm looking at this -- so, for example, if I'm looking at December 2012 -- okay? -- that's where it was basically 102 million gallons for the month.
A. Right.
Q. And the month before was only 35.
A. Right.
Q. The month after was 43.
A. 21.
Q. Excuse me?
A. Oh, the month after, yes, 43. Yes. Okay.
Q. Okay. So in terms of that bump that goes up to 102 million gallons, is it your opinion that that would be caused exclusively by the water table increasing to a point that it infiltrates the collection system?
A. Yes, infiltrates the sewer pipes running to the plant.
Q. Okay. And is that the same opinion with respect to the December 2010 increase to 103 million gallons?
A. Yes.
Q. And so let me ask you, I mean --
A. Wait. December 2010?
Q. Yes.

A. Yes. Yes.

Q. Would you expect that if we were to look at rainfall totals for these months, that they would correlate?

A. Yes, the rise in groundwater is correlatable with rainfall.

Q. So that --

A. Preceding rainfall.

Q. So that should -- if it was -- your scientific hypothesis would be that those would be periods of increased rainfall?

A. As a matter of fact, you could probably go to the City of Willits Corporation Yard records for their monitoring reports and look at years of actual water level fluctuations in their monitoring wells.

Q. Okay. Is that on a monthly basis that they do that, do you know?

A. It used to be. Then it went quarterly. But they may have been there long enough where it's monthly.

Q. Is there monitoring data that's done on a monthly basis anywhere in the City of Willits that you could use to correlate the data you have in Exhibit 174-A?

A. I don't know. The City wells may have some kind of recorder in there. I don't know. There may be

private monitoring wells that they have a recorder. Yeah, there may be stream flow gauges that people operate that record. I don't know.

Q. Okay.

A. As a matter of fact, I think I was monitoring monthly water level --

Q. You're the person who would know, right?

A. -- at Dave Rupe's place on Main Street.

Q. Who is he?

A. He's owner of the property at Main Street, on this corner of California and Main. And he abandoned the wells years ago, but the Water Board would have all those records. And I think I was in a monthly -- and Persico Fossil Fuels on Shell Lane, I was doing that too, monthly. So I have monthly hydrographs in many, many wells where I measured the water level elevation.

Q. With respect to the geographical region that we're discussing, you know, I've been to Willits a handful of times in my life. Is there a uniform soil condition in the Willits city?

A. I don't know, but it sure looks like it because the vegetation looks pretty much the same everywhere.

Q. Would you expect that wells in different places would show -- and I'm not asking you to -- I'm just asking your professional opinion. Would the wells show a

similar depth of groundwater in the region?

A. They do and did, because I sampled several sites in Willits. Oh, and Shuster's Transportation too, and I have water levels from that and that's just upstream. That's on Broaddus Creek.

Q. Okay. And have you ever done anything in terms of water monitoring levels at Brooktrails?

A. No.

Q. In terms of the geographical area that Brooktrails encompasses, would you expect the same thing or is it different geographically?

A. It's really hilly and really different. It's mountainous.

Q. Okay. So you would expect --

A. Yeah, because it's not flat like the valley.

Q. Okay.

A. Because water will tend to, you know, settle out essentially in the valley. There's nowhere else to go.

Q. Okay. And so is the City of Willits in a geographical valley?

A. Yes. Little Lake Valley is the basin, and it floods every year.

Q. Okay. In terms of the inflow into the plant, it's your understanding that the only inflow is from the

sewers' collection systems?

A. Yes. And I just -- I just want to mention flooding because there are times of the year when you can't drive parts of Willits because the water is a foot deep. It's over the ground surface.

Q. Right.

A. So the groundwater was above the ground.

THE REPORTER: I'm sorry; what?

THE WITNESS: The water is over the ground surface.

MR. CROWLEY: The groundwater is above the ground.

THE WITNESS: The groundwater is above the ground.

BY MR. BARTOLOTTA:

Q. Okay. But --

A. So it could go into manholes, you know.

Q. Right. And that's what I'm trying to find out, if there's any surface runoff other than into the collection system that would be increasing the input.

A. But I've lived there since 1996.

Q. I understand.

A. Real close to the sewage treatment plant, and the flooding only happens maybe two or three or four days in a row and that's all, as far as the water being above

ground. It's not like months at a time.

Q. Right.

A. But that would contribute -- obviously when it went down, it would contribute to high water levels.

Q. Okay. Is there any way that that could be flowing directly into a collection system that goes into the plant, other than defects in the collection system?

A. Only if you have sewer manholes that leak and water is seeping into them as it's flooding.

Q. Well, if you had a manhole that was under water, wouldn't that potentially contribute a lot of water --

A. That's like a leak in a pipe though. It's not an open hole. You've got a manhole there. Maybe you've got a hole to lift it up with so water leaks into that.

Q. Okay. Are there any other opinions that you intend on expressing at the time of trial?

A. The ones I've expressed today and perhaps others I may come to after more study and people ask me to look at other things before trial.

Oh, and if asked about Tom Herman, I have an opinion about him.

Q. Okay. Do you have an opinion about him now?

A. Yes.

Q. What's your opinion about him?

A. He's not an engineer and he played like he was for years.

Q. Okay.

A. He was so-called town engineer -- City Engineer.

Q. Okay.

A. And he's just a surveyor.

Q. Okay.

A. And I believe he's just a grandfathered surveyor. He never took the test.

Q. Okay.

A. So he was doing all sorts of cost estimates for the City on other things that he shouldn't have been doing. He shouldn't have been calling himself an engineer because you can't do that by the Business and Professions Code.

Q. Okay. Anything else?

A. I think he was involved in the design of the plant.

Q. Okay.

A. And he shouldn't have been.

Q. So in terms of your readiness to prepare for trial, are you expecting to receive additional documentation to help your opinions?

A. I don't know.

Q. Have you had a conversation with Mr. Neary about whether additional documents --

A. No, nothing has been said about what's coming up and so forth, I don't know, but I may have other opinions based on what he may discover and he's looking at.

Q. Okay. Well, if additional information and documentation are provided to you that has -- that either support or contradict or provide you with new opinions, then I'm reserving the right to redepose you with respect to those new opinions.

A. Understood.

Q. And obviously there may be experts who are your counterpart on our side and you'd be able to comment upon what those opinions were, but it sounds like you're not certain as to whether additional documentation might be given to you; is that correct?

A. That's correct.

Q. So to the extent that there is additional documentation -- well, first of all, what you provided to me on the disk, other than the deposition transcript you have there, is the stuff in that manila folder on the disk?

A. Yes.

Q. So I have everything on that -- on my hard

drive now --

A. Yes, you do.

Q. -- that you've reviewed outside of that deposition?

A. Right.

Q. Okay. Is there anything in that novel that served as a basis for your opinion?

A. Yeah, there's the receipt.

Q. No; I meant in the book itself.

A. No. There's nothing -- no notes.

Q. You know, *Dianetics* or something.

A. No.

MR. CROWLEY: The only thing that he may be asked to do that I'm aware of is possibly prepare some demonstrative exhibits demonstrating to the jury the opinions that he's expressed today. So those obviously have not been prepared yet, but I would anticipate, if I was trying the case, that's what I would ask him to do in the future.

MR. BARTOLOTTA: I think you are trying the case. That's why you're in the room, you know. Understood.

All right. We're done.

THE WITNESS: Thank you.

(Deposition of DONALD G. McEDWARDS, Ph.D., concluded at 2:40 p.m.)

CERTIFICATE OF WITNESS

State of California)
) ss.
County of)

I, DONALD G. McEDWARDS, Ph.D., hereby declare under penalty of perjury that I have read the foregoing testimony recorded on pages 1 to 147, inclusive, and I certify that:

_____ I have no corrections.

_____ I have corrections, as reflected by letter or handwritten corrections made to the original transcript, and that I now approve my deposition as true and correct.

_____ _____
Date DONALD G. McEDWARDS, Ph.D.

---o0o---

DISPOSITION OF TRANSCRIPT

I certify that the witness was given the statutory allowable time within which to read and sign the deposition, and that:

_____ The witness failed to appear for such reading and signing.

_____ The witness has waived review/signature on the record.

_____ The witness has reviewed and signed the transcript and has made (no) changes.

_____ A letter of correction has been submitted and is attached to the transcript.

_____ _____
Date LUEL J. SIMSON, CSR No. 4720

REPORTER'S CERTIFICATE

STATE OF CALIFORNIA)
) ss.
COUNTY OF SONOMA)

I, KIM Y. ROTHERHAM, C.S.R. #7397, hereby certify that the witness in the foregoing deposition, named to wit: DONALD G. McEDWARDS, Ph.D., was by me duly sworn to tell the truth, the whole truth, and nothing but the truth in the within-entitled cause;

That said deposition was taken in shorthand by me, a certified shorthand reporter, and a disinterested person, at the time and place therein stated; and that the testimony of the said witness was thereafter transcribed under my direction and supervision; that the foregoing transcript constitutes a full, complete, and accurate transcription of my shorthand notes taken of the oral proceedings.

I further certify that I am not of counsel or attorney for either or any of the parties to the said deposition, nor am I in any way interested in the outcome of this cause, and that I am not related to any of the parties thereto.

IN WITNESS WHEREOF, I have hereunto set my hand this 25th day of April, 2014.

KIM Y. ROTHERHAM
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State of California

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April 25, 2014

Donald G. McEwards, Ph.D.
c/o The McEdwards Group
1025 Hearst-Willits Road
Willits, California 95490

Re: BROOKTRAILS TOWNSHIP COMMUNITY SERVICES DISTRICT vs. CITY OF WILLITS
(Deposition taken April 21, 2014)

Dear Dr. McEdwards:

The original transcript of your deposition taken in the above-entitled action has been prepared and is available at this office for your review and correcting, if necessary. If you are represented by counsel who has a copy of your deposition, you may review that copy and submit to this office by letter any corrections you wish to make.

Unless otherwise directed, the original transcript will be sealed 35 days from the date this notice is sent. If you do not wish to read your deposition transcript, please sign below and return within 35 days from the date this letter was mailed.

You may call to set up an appointment at this office Monday through Friday between the business hours of 8:00 a.m. and 5:00 p.m.

Very truly yours,

Kim Y. Rotherham

Kim Y. Rotherham
CSR No. 7391

_____ _____
Signature Date